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THE



CINCINNATI MEDICAL NEWS.

EDITED BY

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Fellow of American Academy of Medicine, Etc.

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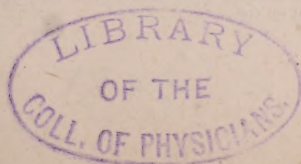
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We owe an apology for the very late appearance of the December issue of the MEDICAL NEWS. We have had this month to make an Index, and besides, other circumstances, over which we had no control, have hindered. We hope soon, however, to catch up and get the Journal out on time.

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ORIGINAL CONTRIBUTIONS.

Notes on Heredity.

BY T. L. WRIGHT, M. D., BELLEFONTAINE, O.

For any man to suppose that he is personally created in the "image," and after the "likeness" of the Almighty, would be a piece of wonderful presumption. But, that man as a *race*, being the reflection of the created universe; which itself represents to some degree the powers and characteristics of its creator, is the "image" and "likeness" of the great Architect, will be readily conceded. And this is a fact not less clear and certain, because the "sins" of mankind—the consequences of infractions of nature's laws, by finite parts of the race, by individuals, bringing discord into the harmony naturally existing between the creator and created—are, by this preponderance of the immortal in man's nature, constantly being eliminated, through the "dying out" and disappearance from earth of those who carry the disabilities and diseases of the disobedient and foolish in their own persons. This disappearance of disease, and of the diseased, points to the divine relationship of human kind, and demonstrates its constitutional purity and perennial youth.

Nature does its mightiest work in details. The shocks of matter and the "wreck of worlds" are, in comparison, insignificant. The ultimate atom, in its infinitude of adaptability, gathers all and disperses all. Its susceptibilities are beyond description or conception. It is not at all difficult to imagine possible combinations of a material atom in the rolling cycles and ages. Once, perhaps, it is the invisible, intangible ether in the interstellar space

called—nothing! Again, it is the solid element of the impenetrable granite, of which worlds are framed. Anon, it enters as a component into the structure of the dreadful fang of some prehistoric monster, leaving in his path havoc and desolation. And now, it enters into the constitution of the venom under the serpent's tongue, and spreads death, cold and pallid, over the ruddy form of some sudden victim. And once again it is a component part of the tear of pity which sparkles like a jewel in beauty's eye.

The nature of the great forces which determine the arrangements of ultimate atoms, and the constitution and changes in the universe of matter, is not known. But there are two subordinate forces which operate upon the arrangement of material atoms, of which we have some slight empirical knowledge. These are the *chemical* force presiding over the form and constitution of chemical compounds; and the *vital*, or *biological*, force, which has to do with the form and constitution of living beings. It is of the latter that we are called upon to speak at this time.

When we speak of the human constitution, we mean a concatenation of traits, mental and physical, which are essential to the human character in health. But when we speak of a constitutional defect, or disease, we refer especially to some traits, mental or physical, as associated usually with a family or connection, and which are distinguished from the essentials of human character. Thus, certain diseases, habits of thought, peculiarities of speech, motion, color, or general conformation, pointing to a family relationship, are called constitutional, and most frequently, also, are hereditary.

It is unquestionably true that the operation of the vital or biological force of which we have spoken, has, in all such cases, been paramount in effecting such atomic relationships in the building of the living structure, as established the physical condition, which made the constitutional temperament, whatever it might be, inevitable.

We can not see the working of this force in action; but in given conditions its results are invariable, and must therefore be in obedience to unchanging laws.

It has been declared, by high authority, that there is nothing in the microscopic or chemical qualities of the germs of ordinary animals, by which it can be known be-

forehand, whether a particular germ will develop into the human form, or into some beast. Still less, is there any property in the human germ which will foretell the final evolution of a generic "cow-lick," or hair-lip, or sixth finger, or of cancer or scrofula, or some special moral proclivity.

But these tendencies exist "potentially" in the germ, and under the guidance of the force of vitality they give form and character to the human being, and they betray, without a shadow of doubt or mistake, individual identity and family kinship.

True neurotic heredity, then, depends upon the capacity of the vital force to determine the relations of the material atoms which enter into the construction of the brain-centers, especially as these relations result in abnormal forms, which are reflected in abnormal functions. It is not necessary to suppose that these forms are perceptible—any more than the forms of the animal germs are perceived by the senses—which, yet, under the vivifying influence of vital activity, develop into widely differing animals.

But the question arises, what is the nature of that modifying agency which wrests vital action so out of its normal and wonted course as to cause the building up of a brain whose parts are unstable and out of harmony—without any perceptible structural lesion being present?

Maudsley says, for example, that "a life which is a systematic negation of moral law initiates a degeneracy," which may be transmitted hereditarily. But what goes behind this manner of living? What is the original force which tempts the man to such abandonment of moral principles?

It appears to us that too many intermediate causes are credited with the founding of neurotic temperaments, the ulterior causes being unperceived or possibly unknown. Arrests of development from imperfect nutrition not only produce scrofula and consumption, but they affect the ultimate perfection of brain-centers. Upon the whole, then, it appears to us that *imperfection, not redundancy*, is the basis, the substratum of a large majority of the neurotic temperaments. Unavoidable diseases and physical accidents and injuries appear to be the beginnings of neurotic conditions, appearing often in distant localities and in strange forms. Observation will show that con-

genital deformities, without remarkable mental or moral traits, will betray a neurotic origin by transmitting mental and moral, as well as physical, obliquities.

We are acquainted, intimately, with an aged couple, neither one of them ever remarkable for any strange moral or mental peculiarity. They have passed through a long life in the pursuits of humble, but honest, industry, and possess the esteem of the community in which they live. But the offspring of these people were strangely affected. One son is a periodical drunkard. Another was habitually intemperate to that extent that he died before he was twenty-five years old from drunkenness. Still another son, died young (though after puberty), from epilepsy. A daughter was hysterical in her youth, and is now the mother of a daughter also hysterical. Another daughter had convulsions upon the occasion of her first confinement. The mother of these persons was said to possess a somewhat hasty temper in her early life; but the father, a mild, patient man, is cross-eyed. This was a congenital deformity. It is surely not proper to attribute all this distress and disease to the constitutional strabismus of the father. But it seems more reasonable to refer them to some remote neurotic diathesis, profoundly affecting an indefinite line of ancestry, to which the paternal deformity pointed, and of which it was a "slight and passing sign of which he was unaware," breaking out in his children, however, with renewed violence.

Diphtheria.

(Read at the regular quarterly meeting of the "Iowa Central Medical Association, held at Marshalltown, Iowa, Oct. 11, 1881.)

BY N. C. MORSE, M. D., PRESIDENT.

I WISH, to-day, gentlemen, to bring before the Society, for discussion, the much-talked-of subject—diphtheria. Not that I have anything new to offer, not that I have made any wonderful discovery in the way of treatment, not that I have cured thousands of cases, but I desire, simply, to have a plain, *common-sense* talk with you on this subject.

First, then, IS DIPHTHERIA A MODERN DISEASE? Not a few physicians and the public generally regard it as such;

but it is neither, as Watson says, "the offspring nor the discovery of this generation." Its history extends as far back as medical literature carries us. To Aretæus, of Cappadocia, who lived during the first century of the Christian era, is given the credit of first describing this disease. Macrolius and Cœlius Aurelianus both refer to it in their writings, and the latter not only recognized diphtheria of the larynx and pharynx, but described the paralysis of the soft parts involved.

The first epidemic of which we have any knowledge occurred in Holland in 1337. Mercado, in 1608, relates the history of a child who communicated the disease to his father by biting his finger. Passing hastily to more modern times, we find this disease described under various names by Huxen, Rosen, Guersent, and others. Bretonneau, in 1826, was the first, however, to describe it as a distinct disease, and it was he who gave it the name which it now bears. The first cases known in the United States occurred in Roxbury, Mass., in December, 1659. Douglass, of Boston, describes it in 1736, and Samuel Bard, of New York, in 1771, since when it has occurred in various parts of the United States. [Vide Jacobi on Diphtheria.] Empress Josephine, Valleix, the eminent French physician, Stephanie, the beautiful queen of Portugal, and Washington, are said to have been victims of it. [Vide Hartshorne's Practice.]

Second.—IS DIPHTHERIA A COMMON DISEASE? I fear it is not as common as some physicians would try to have the public, at least, believe. I think, gentlemen, it would astonish not a few of you to see the private statistics of some of our (Western) physicians, or to hear of the vast number of cases they have under their charge. Any affection of the throat however simple is called by them diphtheria, and it is often amusing to see what intrigues these men enter into to convince their patrons that a simple laryngitis or tonsillitis is diphtheria. First of all, they fill the patients' minds with terror, causing them unconsciously to magnify their symptoms, then they call in the neighbors, the case is talked over with them; they have them sit up at night and have them note the various critical changes—they probably sit up a night or two themselves *to point out these changes*—and when resolution occurs, they openly boast of a wonderful cure. Now, suppose they really have a case of diphtheria. Dissolution invariably occurs,

but they have a loophole for escape large enough for the most ponderous quack, *i. e.*, the medicine was not properly administered, or the patient was neglected or was past relief when their assistance was requested. I assure you, gentlemen, this picture is not overdrawn. Hundreds of cases of simple subacute tonsillitis are annually treated or gravely described and termed severe cases of diphtheria.

The homeopaths, who, as a class, are noted for their wonderful imaginative powers, are not behind with their statistics of this disease. In an *Epitome of Homeopathic Achievements*, by O. B. Bird, we find the following: Dr. Y——, a homeopathic physician of Washington, in 1856, treated one hundred cases of diphtheria, WITH ONLY THREE deaths. Under allopathic treatment two-thirds of all cases died. Dr. H——, of Franklin Co., N. Y., treated, in 1860–62, one thousand cases of diphtheria, and lost eight per cent., while the best allopaths lost twenty-five per cent. If a man advertises that he can cure EVERY case of diphtheria, the public, instead of at once branding him as a quack, rush after him with extended hands, and without a test he is published far and wide. The quack who carries with him the greatest air of mystery, the one who can tell the most incredible stories, is the most successful. Yet why an “Indian doctor,” a clairvoyant or phrenologist, should know more than any one else, would puzzle any one to tell.

There being others than physicians present, I will illustrate my position concerning the credulity of the public by relating the following anecdote: There appeared in one of our Western towns a man who called himself an “Indian doctor.” His raven locks, which reached his shoulders, and his painted face, of course, attracted public attention, and he was soon all the vogue, to the great chagrin of the regular physicians. At last he had an amputation to perform. The consulting physicians stood off to see the ignorant man make a fool of himself, but to their great surprise, he performed the operation *well*. One of the doctors took him aside, and inquired how he knew so much of surgery. The quack replied by showing him a diploma, at the same time saying that he knew he should starve if he did not pretend to quackery. Upon this being reported to the others, one of them said, “We’ll

ruin him now," which they did by reporting everywhere that he was a regularly educated physician.

I do not wish to be understood as meaning that this popular fallacy—calling every case of throat trouble diphtheria—is due entirely to ignorance or inability to form a proper diagnosis, but rather that many practitioners encourage or foster this belief in the people, either to establish a reputation, or where deaths occur, preserve it.

Third.—But, WHAT IS DIPHTHERIA? The name, diphtheria, is applied to "a specific contagious disease, which occurs epidemically, endemically, and solitarily, and is characterized by greater or less inflammation of the membranes of the pharynx, larynx, or air-passages, upon which, especially those of the fauces and air-passages, deposits of lymph or false membrane form, which usually contain fungoid elements—(bacteroid mycosis)." [Vide Morell MacKenzie on Diphtheria.]

The word itself is derived from the Greek word "*διφθερα*" (a skin or membrane), hence the formation of this membrane in the throat, posterior nares, or nasal cavities, is generally regarded as pathognomonic of this affection.

The symptoms which attend the invasion of diphtheria do not, as a rule, differ from the ordinary acute inflammatory affections of the throat (Bristow's Practice) except the onset is often abrupt, or the patients may complain of "something sticking in their throat." In the majority of cases, after the disease has existed a certain length of time—from a few hours to one or two days—whitish, grayish or buff-colored isolated patches make their appearance on some portion of the mucous membrane of the tonsils, palate, uvula, or pharynx. These patches tend rapidly to spread, and may thus in a few days form a continuous covering to the whole posterior surface of the throat. By this time the tonsils and uvula become enlarged, and the glands about the angles of the jaw are swollen and tender. The inflammation may extend down the œsophagus, or, what is more common, it may attack the larynx, and clog up the air-passages, or extend from the throat to the ear, causing serious lesions. Again, it may attack the conjunctiva, and spread to the cornea, causing ulceration, perforation or opacity of that organ. Deglutition, as a rule, is unattended with the slightest distress. The temperature is not a characteristic feature, *but there is always at the onset fever*; the thermometer

may reach 105° or 106° , but after the first thirty-six or forty-eight hours, in severe cases, it gradually becomes lower and lower, until it scarcely exceeds normal. Albuminuria is often present, but so far as my experience goes, it is only found in those cases where the temperature has reached or exceeded 103° . Prostration comes on early, and, as the disease progresses, respiration is accelerated, the countenance is haggard, the skin cool and moist, and, "as the difficulty of breathing increases, all the auxiliary respiratory muscles are called into play, the face becomes pallid, the lips and nails blue, the skin cold and clammy, and, as the dyspnœa increases, the child struggles for breath; the nostrils widely dilate at each inspiration. Excited and alarmed, the patient, in its agony, clutches at its throat, and exhibits all the signs of approaching asphyxia. These symptoms increase rapidly unless relieved by treatment, and the struggles of the child grow worse and worse, until after awhile the excess of carbonic acid in the blood produces insensibility, and the child is no longer cognizant of its sufferings." (J. Solis Cohen.) Follicular tonsilitis is recognized "by its local character and the cup-shaped depressions left after the removal of the deposits." (Bristowe—Jacobi.) From the membranous croup, however, the diagnosis is by no means easy. These two diseases are closely allied. So much so, indeed, that the majority of physicians believe them to be identical. To say the least, they are "twin sisters." There are, however, a few characteristic or practical clinical differences, which lead us to regard them as distinct diseases. First, diphtheria is contagious; membranous croup is not. Second, in diphtheria *there is always fever at the onset*, which may continue throughout the disease, whereas "the relative absence of fever in croup is pathognomonic of that disease." (Jacobi.) Third, diphtheria is inoculable; croup is not. Fourth, diphtheria attacks both the old and young; croup is confined mostly to children. Fifth and last, death, in croup, occurs from obstruction; diphtheria is often fatal without the least impediment to respiration. There is another class of cases which we often meet with where there appears upon the fauces or tonsils a few distinct patches, accompanied with much pain and distress. These patches HAVE NO TENDENCY TO SPREAD, and resolution takes place in from three to six days without any great amount of

constitutional disturbance. These cases are not contagious, and should be designated as *diphtheroidal*, and not as true diphtheria, as is often the case. From scarlet fever the diagnosis is apparently easy, although many practitioners of ability assert that scarlatina anginosa, or putrid sore throat, and diphtheria are synonymous. Scarlet fever, however, begins abruptly; diphtheria usually has a distinct incubative period, varying from two to six days. Scarlet fever commences ordinarily with vomiting, and is attended with an efflorescence, while there is no fibrinous exudation upon the fauces, unless, as so frequently happens, diphtheria occurs as a complication. The disease called by some "false diphtheria," by others, "spreading quinsy" (not uncommon in the West), which sometimes carries off the entire members of a family, differs from diphtheria chiefly in the absence of the characteristic membranous deposits, and originating in the unsanitary conditions which surround not a few of our country homes. (For a further description of this disease I refer you to an article written by Eli McClellan, Major and Surgeon U. S. A., which appears in the *N. Y. Med. Record* of Feb. 5, 1881.) The diagnosis from all the milder throat troubles—catarrhal, pharyngitis, laryngitis, tonsillitis, etc.—is obviously easy, if we limit the term diphtheria to those cases in which a pseudo membrane forms of a specific *contagious* character.

Fourth.—WHAT IS THE CAUSE OF DIPHTHERIA? I must confess that we know no more about it now than did those who lived a hundred years ago. For a long time it was thought that from the discovery by Huetter and Oertel (in the exudations, mucous membrane and adjacent lymphatic glands) of minute organisms of the bacteria group, that these parasites were the infecting principle. Furthermore, Oertel asserted that animals, which have been inoculated with diphtheritic material, die with their internal organs infested with micrococci, and that the presence of these is characteristic of diphtheria. But the experiments of Burdon-Sanderson cast serious doubts on the agency of micrococci, and the more recent experiments of Wood and Formad seem flatly to contradict these statements. They (the latter) have carefully examined the internal organs of rabbits which died from the inoculation of diphtheria, and found no micrococci, and these results fully accord with the observations of

Curtis and Satterthwaite. Again, Morell MacKenzie tells us that the disease may occur either with or without bacteria. So, in conclusion, all we can say is, that the bacteria theory remains to be proven, and the theory that the poison is similar in nature to that which causes other specific diseases and propagated by contagion is, no doubt, true. I do not believe that the disease is the product of filth, but it is an unquestionable fact that the sanitary state of houses or localities, and the conditions of health of those exposed to its poison, have much influence over its development.

Fifth.—WHAT IS THE MANNER OR MODE OF DEATH? The tendency of the disease is to produce anæmia and exhaustion of the vital forces. Hence, the majority of deaths occur by asthenia. The dynamic force of the system being gradually exhausted, the patient becomes weaker and weaker, until finally the heart ceases to beat.

A great many cases, however (and it is a fact worthy of notice), die while the patient is still able to sit up or walk around the room. Death comes suddenly, without the least impediments to respiration, without warning; a surprise to the friends and parents, and often to the physician. The cause of this is paralysis of the heart, and it is well to bear in mind that dissolution from this source may occur, unexpectedly, at any time during the course and convalescence of the disease. The precursor of dissolution is an *intermittent pulse*, and, by noting this symptom, it has several times prevented me from a surprise. The minority die by apnœo or asphyxia, *i. e.*, a rest of respiration, either from the inflammation extending down the trachea and involving the lungs, or by suffocation from obstruction in the larynx or pharynx.

In conclusion, we come to the question of

Sixth.—WHAT SHOULD BE THE TREATMENT? First of all, it is well to remember that it is almost impossible to treat successfully a severe case of diphtheria in a hovel. Pure air and water are indispensable adjuncts. In the West it is often exceedingly difficult to enforce good hygienic discipline; far more so, perhaps, than our Eastern brethren are aware. To illustrate this fact, I will relate the following incident: About a year ago, in attempting to ascertain the cause of a case of typhoid fever I was treating, I found in a cellar under the room in which the patient lay a large mass of decayed vegetation. I called to the

farmer, and asked why he did not remove the filth. His reply was, "What's the use; it would be the same way next year." "Well," said I, "old fellow, that's a poor excuse; why do you wash your face? It gets dirty again." His answer closed the discussion. He "*didn't know as he would if it weren't for the style of the thing.*"

Having our patient, then, under as good hygienic control as possible, we next turn to our various medical treatises, medical journals, etc., on this subject. Here we ascertain that sulphate of soda, benzoate of soda, hydrochloric acid, salicylic acid, hydrate of chloral, sulphuric acid, pilo carpine and cubebs are among the latest remedies offered for the cure of this disease, and each has its "hot-headed" advocate. But experience has proven that there is no specific as yet discovered that is successful in combatting the disease or destroying the poison upon which it is dependent. Hence, at the present time, all we can do in the way of treatment, as in all other "specific affections," as typhoid fever, small-pox, scarlet fever, etc., is to moderate its force, prevent complications, if possible, and, by supportive treatment, conduct it to a safe issue. The treatment, therefore, is wholly symptomatic, and must be both constitutional and local. Constitutional, because the disease is a blood poison; local, to reduce the inflammation to prevent obstruction or suffocation, as well as septicæmia.

At the beginning of the disease, I usually administer a purgative of calomel, as recommended by Dr. Aitken. Then a febrifuge containing a diuretic (gelseminum et spts. nitre dulc.) is given *pro re nata*. When the voice is husky and the throat parched and dry, the patient is allowed to swallow, *ad libitum*, small pieces of ice, which often affords marked relief. Now, if at this stage of the disease, there is no malignant tendency, I should prescribe and rely upon the old "chlorate of potash and iron treatment," and, as the mode of administering these remedies is almost as essential as the remedies themselves, I would prefer to follow the plan as introduced and advocated by Dr. Bellington, of New York City (vide *Med. Record*, Feb. 1879), which is, no doubt, familiar to you all. To this treatment I add by means of the steam atomizer, the spray being directed into the fauces, the inhalation of the maximum solution of muriate of quinia, carbolic acid, or oil of turpentine. Now, if in spite of our efforts the vio-

lence of the disease increases, and the character of the respiration indicates obstruction due to the presence of membrane, I should resort to the inhalation of steam and slacking lime, for *in these cases* I believe them to be the most valuable adjuncts in our possession, their use being to favor the detachment of the membrane and cause expectoration. To accomplish this double purpose, I usually employ the following plan: Selecting, first, a small room, I have a stove placed as near the center of the room as convenient, upon which a large pan half full of boiling water is placed, and into this water fragments of lime are dropped from time to time, which produces a copious evolution of steam. The atmosphere should be thoroughly and continually saturated, and this steaming is continued day and night as long as the occasion requires, and then is gradually withdrawn. I regard this continuous ebullition of steam preferable, and I know it will produce better results than when its use is limited and interrupted. Should our efforts fail to relieve and the dyspnœa is increasing, and if the inflammation has not involved the lung tissue, our only hope of relief lies in tracheotomy. If at any time the patient is threatened with collapse, or if there is any malignant tendency present from the start, or if there is an intermittency of the pulse, we should then have recourse to alcohol, and give it in large quantities, *with the addition of the steam or spray treatment as suggested.* The use of nitrate of silver, persulphate of iron, or other strong caustic applications to the throat, I believe to be injurious, as they are not only a source of annoyance to the patient, but they increase the inflammatory action. And, furthermore, experience shows that those who employ the most powerful applications do not present any better results.

There are many remedies for the treatment of this disease brought to our notice in the medical journals. These I dismiss with the remarks of Jacobi: "The journals of the past ten years are flooded with superficial observations, insufficient experiments, and immature conclusions."

In conclusion, I would say, bear in mind the adynamic character of the disease—that prostration comes on early—remember that the disease is contagious, and is no respecter of persons, do not overlook the constitutionality of the affection, and, above all, do not let your patient suffocate for the want of tracheotomy.

Cancer of the Liver.—Illustrative Case.

BY DR. O. A. REA, B. SC.

Read before the Marshall County (Ind.) Medical Society.

THOSE *organs* of the system having a glandular structure are more liable to certain *forms* of disease than those having a different structure. Yet the largest organ of this class will be no more likely to be diseased, and subject to pathological changes, than other organs having an equal physiological importance in the animal economy. Notwithstanding this plain, and, to the profession, accepted, axiom, the people generally think differently. The charlatan who travels, the quack who publishes, "Every person his own doctor," and the insane specific vendor, have been teaching the masses. In consequence, nearly all the babies are "liver grown," many people have "biles on the liver," their "liver is out of order," some have "consumption of the liver," others have a "red tongue," and that "denotes too much acid (?) in the liver;" and we are frequently told, "there is no use to give quinine," for "mine are liver chills," etc., etc. Nearly three-fourths of our people actually believe they have a bad liver, and have taken innumerable patent nostrums, until it is a wonder there are as many sound human beings with regard to the digestive system.

However, this organ that elaborates the bile is sometimes diseased—sometimes enlarged, and sometimes atrophied. Gemmel, of Glasgow, says: "If enlarged, and presents nodules, which are painful, and the pain is increased by pressure, there is strong evidence of cancerous disease, especially if the nodules are depressed at center of summit."

The liability of the liver to become cancerous seems, from the recorded cases, to be less than the rectum, the stomach, the lymphatics, and, in the female, less than the uterus and the mammary glands. When it does occur, it is usually secondary to cancer in some other part. Of ninety-one cases reported by Frerechs twenty-two only were primary.

Of the different forms, encephaloid is the more frequent; and, next to this, the scirrhus. The different forms may present either a diffused or circumscribed character.

When in the form of nodules, they may be numerous, differing in size from that of a pea to a child's head, according to stage of growth. In some cases there is but a single nodule.

The disease may occur at any age, but the greatest liability exists between forty and sixty years.

When cancer of the liver is secondary, it usually occurs after cancer of some organ connected with the portal circulation, and the symptoms, even when primary, are sometimes referred to some other organ connected by this vascular system.

In most cases the diagnosis is easily made; but in some instances it may be mistaken for other tumors of the abdomen, or some other kind of hepatic tumor. It may be difficult at times to decide, as to enlargement, between hepatic dullness and a thickened omentum, or to distinguish hepatic dullness and nodules of the liver from an omentum with perforations containing knuckles of small intestines. All of these may produce circumscribed peritonitis and peritoneal effusion. An extensive scirrhus growth in the anterior abdominal parietis, in the umbilical or epigastric region, might present some of the local symptoms and all the general appearance of a cancerous liver. In these cases the lower limit of hepatic dullness could not be made out by percussion.

The patient presents a pale, waxy color, sometimes icteric, especially toward the last. There are progressive emaciation and debility, although the disease may make great progress without these signs being present, or these symptoms may be present without immediately pointing to the seat of affection.

A fatal termination may be hastened by causative inflammation in adjacent viscera. Independent of this, progress is sometimes rapidly fatal, the patient lasting but a few months. At other times the disease makes slow progress, and the patient may live one or two years. It is sure, sooner or later, to prove fatal. Death usually occurs from asthenia.

The treatment should be palliative and sustaining.

ILLUSTRATIVE CASE.

October 3, 1881, I was called to visit Charles B., æt. 54. German farmer. Complains of lancinating pain in abdomen, especially in hypogastric and left inguinal

regions; want of appetite, sleeplessness (insomnia), etc. Looks anæmic, and presents a pale, waxy color. Says that he first felt pain in left side of abdomen, and first noticed enlargement on that side just after harvest. He says that this enlargement gradually increased, until it now covers whole anterior part of abdomen. He also stated that a physician had been consulted two or three times, who prescribed, and told him the trouble was "biliousness." Has been confined to room about two weeks. Previous health good. Had an abscess over hip about ten years ago. Parents both died when he was quite young. Does not know of what disease. Has no brothers or sisters living that he knows. Knows of no hereditary disease among his ancestors. Married and has six children living. None dead. Has been in the habit of drinking liquor. Circulation, 90; respiration, 28—more frequent when lying down; inspiration same duration as expiration; auscultation and percussion reveal no disease in viscera of thorax. Tongue moist and clean; deeper red than normal. Bowels constipated. Inspection of abdomen reveals a nodulated enlargement, or tumor, covering the whole anterior part, so that limits of dullness of abdominal viscera can not be determined. Different positions of patient do not seem to change the shape or location of enlargement. Urine darker than normal. No trouble about voiding it. Not analyzed.

Diagnosis.—An extensive pathological growth, or abdominal tumor, producing anæmia, obstruction to action of bowels, impediment to respiration, etc. The growth probably cancerous.

Prognosis.—A fatal termination, certainly, unless tumor should prove benign, and a very doubtful case at all events.

Treatment:

R. Amm. Hydrochl. (pulv.) . . . ʒj.
 Tr. Ferri Chlorid, . . . f. ʒss.
 Tr. Nucis. Vom., . . . gtt. xL.
 Aquæ Puræ, q. s. to make . . . f. ʒij.

A teaspoonful of this mixture to be given every four hours. Also

R. Hydrate of Chloral, . . . ʒiv.
 Bromid. Potas., . . . ʒij.
 Aquæ Puræ q. s. to make . . . f. ʒij.

Teaspoonful to be given every four hours, unless pain is relieved entirely.

Ordered enema to move bowels, also milk and animal broth per orem at least four times p. day.

October 8.—Circulation, 90; respiration, 30. Added quinia to tonic in three-grain doses, and $\frac{1}{2}$ -grain doses of morphia to anodyne.

October 10.—Circulation, 96; respiration, 30. Patient resting very nicely. There seems to be a pointing of the tumor above the umbilicus, presenting a protuberance about the circumference and (vertically) half the diameter of a hen's egg. No fluctuation, but somewhat elastic. Added fl. ex. of lactucarium to anodyne, and ordered a tobacco poultice over tumor.

October 13.—Patient complains of pain unless under influence of anodyne. Introduced hypodermic needle into protuberance to explore. Drew out a few drops of thick, dark-red substance resembling coagulated blood. Continued same treatment.

October 20.—Respiration, 38; circulation, 108. Patient failing in strength. No appetite. Dyspnœa somewhat relieved by sitting posture. Added whisky to treatment.

Oct. 24.—Messenger reported that patient has diarrhea and vomiting. Death occurred about noon.

Autopsy twenty-two hours after death. Assisted by Dr. Wiseman. No rigidity of muscles of extremities, and only slightly those of abdomen. Decomposition commencing. Surface presents about the same color as described at first examination, with a deeper icteric tint, except abdomen, which shows somewhat livid.

First incision from middle of sternal bone to symphysis pubis. No subcutaneous fat. Muscles much attenuated. No adipose fat. Second incision at right angles to first, just below umbilicus. About a pint of slightly amber-colored fluid in peritoneal sac. Nearly the whole of greater omentum contained a deposit of dark ovoid cells, or nodules, so thickly infiltrated as to destroy the normal outline of the membrane. Specimen will be presented to the Society for inspection. Kidneys normal. Spleen slightly congested. Stomach and intestines normal in structure; crowded backward from natural position. Bladder partly filled with urine; pressed downward and flattened.

The liver occupied nearly the whole anterior part of

abdominal cavity. Nearly the whole surface studded with nodules from the size of a very small pea to those having an irregular circumference of six or seven inches. The larger nodules umbilicated. Incisions show that the nodules are infiltrated through the substance so as to destroy the normal structure of the liver in every lobe. Gall bladder contains about an ounce of bile. The ductus communis C obstructed; probably recent. The enlargement has completely obliterated the notch, and depression between the right and left lobes. Weight $12\frac{1}{4}$ pounds, or nearly 6 K. G. We also present this whole pathological structure to the Society for examination. The large protuberance did not exist on the surface of abdomen after death, and I can not account for it, unless one of the larger nodules was in a position to press outward at that particular place.

SELECTIONS.

Letter from Washington—A Day with Guiteau.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: We arrived early Thursday morning, and drove at once to the Tremont House, where Mr. Scoville boards. Our cards were sent up. While I was waiting in the office, a small, neatly dressed man came up to me and said his name was Guiteau, and that Mr. Scoville would be down soon. Having associated the name of Guiteau with everything grim and demoniacal, it was something of a shock to find so inoffensive-appearing an individual presenting it. The gentleman was Mr. J. W. Guiteau. He appears like a polite and "every-day young man"—nothing more. Mr. Scoville soon came in. He is gray and bald, but vigorous in manner, and shows no signs of age. His face is somewhat pale and his eyes red, as though from over-use. He talked to us very freely about the trial. He was very sanguine, and expects to convince some of the jury at least that Guiteau is insane. He referred to the unfavorable comments made upon his hypothetical question. He said, however, that he put in it only what he expected, and was really

obliged to prove before the jury. He thought he could convince the jury of the truth of most of his assumptions. Speaking of his not cross-questioning the first experts for the defense—*i. e.*, Drs. Godding, Nichols, Folsom, and others—he said that he expected to be able to prove by cross-examining the experts for the defense all the points necessary. Mr. Scoville, at the early part of the trial, thought that almost all of the experts would come over to his side. He was too optimistic, however. He discussed the conduct of the Government experts very freely, though not unkindly. They had met, and had finally all agreed to go over to the prosecution, and stand by each other, as it was, in a measure, their interest to do, being all asylum superintendents. It was a kind of “psychological contagion of non-expertness,” as Dr. Beard had called it. This is hardly a fair way to put it, I think, as some had undoubtedly made up their minds independently before or after arrival at Washington.

Mr. Scoville referred to Dr. Hamilton’s testimony as being unnecessarily positive in character. He showed us the measurements of Guiteau’s cranium, as made by that witness. They were taken in the usual way; but it so happened that the configurations of the median line, of the auriculo-bregmatic line, and of the circumference just above the external angular process, do not show the irregularities as they really exist, but only a slight bulging on the right side. I enclose them here for your use, if you wish. The fact is, that there is a decided bulging near the left parietal eminence (the posterior vertical line, described by Topinard, would pass through it), and a depression almost corresponding on the right side. I examined the cast of the head carefully. It does not show the irregularities so well as the head itself, but one can see an obliquely directed ridge of bone passing from about the left parietal eminence backward, downward, and toward the right till it reaches the vicinity of the right ear. This ridge is two or three inches wide. Most of it is on the left side, and it makes the skull noticeably asymmetrical. I took a strip of lead and adapted it to a line on the skull, passing from the left ear over the occiput to the right ear. In this way I got a trustworthy tracing, proving in quite a striking manner the degree of asymmetry of the skull. I also saw a tracing made by

the latter. But this configuration is too low down to indicate anything. A tracing made at about the same height by Dr. Hamilton shows only a slight bulging on the right side. Another circumferential measurement made parallel to the alveolo-condyloid plane, about one inch lower than the bregma, just above the frontal prominences, shows better than any other the apparent fact that there is less brain on the right than the left side. This, combined with the deficient innervation of the left side of the face, and the turning of the tongue to the left, may or may not indicate something. Most likely the facts are of no importance at all.

We went up to the court-house, and I obtained a seat close by the dock, so near that I could touch the prisoner as he sat there. I was not rid of the idea that something massively brutal and fiendish was to be expected in the appearance of President Garfield's assassin. There was consequently a mixture of surprise and disappointment on first seeing the prisoner. He is a puny, white-faced, insignificant little fellow, with a peculiar look in his eyes, and a rather anxious expression on his face. He sat down in the dock, but at once began an appeal to the judge to have his usual guard of policemen. I watched him narrowly for the two hours ensuing. He seemed to be in a state of nervous tension all the time, with his mind keenly awake to every incident of the trial. He did not seem to be feigning anything, but he did appear annoyed and anxious at times. He read the newspapers; there is no doubt of that, for I could see his eyes move from time to time. It is a mistake to suppose that his interruptions are all well-timed and useful to himself. He exults when a point is made for him, and loses no chance of getting a hit at Corkhill or Porter; but he abused his counsel roundly for putting in a letter applying to Cameron for \$500--a letter which, if sincerely written, is a most extraordinary document. There is nothing like a circus display in the court-room, as has been intimated; but there is not unfrequently slight laughter at the remarks of the prisoner. It is difficult to conceive the intensity and bitterness of feeling against Guiteau shown by the prosecuting attorneys. Corkhill seems to be in a state of constant irritation toward him; Judge Porter never interposes a remark without attempting some dramatic effect for the benefit of the jury. Mr.

Davidge and Judge Cox are more fair. On the other side, Mr. Scoville battles away, doing his best, and doing very well. He refuses to be imposed upon, and is showing a better appreciation of the points that he must make as the trial proceeds. He is profoundly convinced of the insanity of Guiteau, and appears to be only amused at the abuse heaped upon him. Mr. Reed is a sharp lawyer, but not an extraordinary or particularly brilliant one. I doubt if he has a very great knowledge of insanity in any of its relations.

It is apparent, on the whole, that the prosecution is working its very utmost—not to discover the real mental condition of Guiteau, but to have him hung as soon as possible. On the other hand, the defense tries simply to convince the jury that Guiteau was insane on the second of July, and did not at that time know the difference between right and wrong. Of course, to one looking at the matter from a scientific point of view, the whole trial is a ridiculous farce. Bitterness and passion are at the bottom, and reason is used only in so far as it helps on the desires of the heart. The minds of the Washingtonians are drenched with this same hate of Guiteau. I met no one, male or female, who was able to discuss the question of Guiteau's sanity without interjecting a wish that he should be hung. It is possible that the experts felt somewhat the influence of this feeling. In those whom I heard examined there is no question that they strained a little in order to increase the effect of their testimony. Thus, one gentleman, Dr. Kempster, testified in a way which would lead the listener to think that heredity was a very insignificant element in the causation of insanity. An impression was also given that delusions of "inspiration" came always through suggestions from without, and were rapid and instantaneous in their development and action. A few of the experts testified to a belief in Guiteau's feigning. I can understand how such a suspicion would arise, but I could not convince myself that it was a fact. Guiteau is certainly sane enough now not to want to be hung, and he tries in an anxious and blundering way to help his cause. It is plain, I think, that his case would be better, on the whole, if he had kept still. I would not wish to intimate that the experts for the defense are not perfectly sincere in the views they testify to. But it

seems to me that it would be almost impossible to live in Washington for five weeks and not catch some of the sanguinary spirit afloat there.

The real issue of course is: Is Guiteau insane? The methods used in the trial to obtain a settlement of that question are to the last degree farcical. The experts are used by the lawyers simply to serve their ends; and opinions or views that would not be likely to affect the jury are treated with indifference.

After the close of the afternoon session we took a carriage and drove over to the jail, where we were conducted to Guiteau's cell. This is the last of a long row of cells, and the largest and best of them. Guiteau was seated at a table, engaged in his never-ending writing. He rose to receive us, and said he was rather busy, but would be willing to talk to us. He has been rather over-interviewed, and does not enjoy it as he once did. However, he treated us courteously, offered us seats, and answered our questions, for the most part, in a mild and pleasant tone of voice. My companion asked him if he was a Christian. "Yes," he said, "I hope so—indeed, I know so—of course." We questioned him about his inspiration. He thought it was like that of the apostles. He thought his book "Truth" was inspired, just as the Bible was. He told us about the hard work he had put upon it. The book is out of print now. I asked him if he thought, supposing he were let out, that he would be liable to have an inspiration again like that which caused the assassination. "No," he said, "of course not; I don't wish to talk about that." He got a little surly, and again a little excited, when talking about public opinion, which, he was convinced, was turning in his favor. He dwelt upon this a great deal. I asked him what his feelings were after he removed the President. He said that after he had been safely placed in jail, he never felt happier in his life. He was pleased and satisfied with the progress of the trial, and did not allow it to worry him after he got back to jail. I imagine that it did worry him a little, however. He said he did not sleep very well; he slept for about four hours, then awoke and dozed irregularly until morning. Guiteau's face is pale; his eyes have a peculiar look, to which I have referred, and which is due, in part, to the white and almost œdematous lids, reddened margins, and suffused conjunctiva.

The tongue, when protruded, turns very noticeably to the left—not only the tip, but the whole organ. The experts have stated that this is not rare or unusual. It so happens that in my experience I have never seen a tongue so deviated in a healthy person; hence, I was struck by it. There is a vertical furrow on the right side of the forehead, but none on the left. Of the two furrows on each side of the mouth, that on the left is deeper. The left eye, that is, its palpebral fissure, seems smaller. By watching very closely, one can notice a slightly less active movement of the muscles of the left side of the face. This is very slight indeed. In smiling, the lips appeared to be drawn out symmetrically. On the whole, the evidences of physical defect in Guiteau are slight.

Guiteau's appearance was mild and inoffensive. I could hardly realize that I was standing in the presence of a person who had done an act which aroused a great nation, altered so many destinies, and turned the eyes of the whole world upon him; a man who, if sane, is a greater monster than ever was conceived by the weirdest imagination of Sue or Dumas.

I went to Washington thinking that society ought to consider Guiteau a sane man. It is difficult not to feel now that the theory that he is insane best harmonizes and makes clear his actions. If I were an expert (which I am not) and obliged to testify, I would say that I did not know—a position at once safe, scientific, and impregnable.

Yours, etc.,

C. L. D.

NEW YORK, *December 31, 1881.*

New York Academy of Medicine.

Stated Meeting, December 15, 1881.

TRANSIENT ALBUMINURIA AS IT OCCURS, PARTICULARLY IN CHILDREN AND ADOLESCENTS, IN APPARENT HEALTH.

DR. FRANK P. KINNICUTT read a paper on the above subject, in which he first alluded to the practical importance of the occurrence of transient albuminuria, to which especial attention had been directed during the past few years by Sir William Gull, George Johnson, Saundby, Moxon, and others, and then gave a resume of

the various theories which, from time to time, have been offered in explanation of this phenomenon.

That which the author of the paper suggested as the most probable was the following: The transient albuminuria in persons apparently healthy is due to slowing of the blood-current in the glomerular vessels, dependent upon temporary vaso-motor disturbances, with alteration, also temporary, in the glomerular epithelium. He farther believed that the real source of irritation was to be found in the temporary presence of imperfectly oxygenized matters in the renal circulation—in other words, transient oxaluria and lithuria.

Dr. Kinnicutt then reviewed the cases of transient albuminuria which have been reported by various observers. In 1873, Sir William Gull said that, in his experience, it occurred in young, growing men and boys almost as frequently as spermatorrhœa. In 1878, Moxon, in "Guy's Hospital Reports," reported nineteen cases. Dr. Clement Dukes, in the *British Medical Journal*, November, 1878, reported several cases, which, in many respects, differed from those given by Dr. Moxon; and in the same journal for November 10, 1881, Dukes had reversed his opinion, and stated that he regarded albuminuria as evidence of true Bright's disease. Dr. George Johnson also, in the *British Medical Journal*, had directed attention to the question of temporary albuminuria, and had expressed the opinion that the smallest trace was always pathological and never physiological. Reference was also made to cases reported by Saundby, of Manchester, and others.

Dr. Kinnicutt then gave a brief sketch of each of his own cases. The first three patients were young men, aged twenty-three, twenty-one, and seventeen respectively. In each case there was a large amount of albumen found in the urine, together with oxalate of lime and uric acid crystals. The chief subjective symptoms were: sense of weariness, lassitude, inaptitude for either mental or physical labor, headache slightly in the morning, impairment of appetite, etc. Exercise in the open air and mineral waters were prescribed, together with regulation of diet, occupation and habits, and both the subjective and the urinary symptoms disappeared permanently. The histories of several other cases were given, occurring in patients whose ages varied from five to twenty-two.

His own observations seemed to show that temporary albuminuria, as it occurs in children and adolescents in apparent health, may be traced, in a large number of instances, to a transient oxaluria or lithuria; and he suggested that the sequence of events in the causation of the albuminuria is as follows:

First.—The temporary presence of a large amount of imperfectly oxygenated matter in the circulation.

Second.—Disturbances of the general nervous system, in which the vaso-motor system of the kidney shares, or one confined to the vaso-motor system of the kidney in its elimination of these products of a faulty digestion.

Third.—A transient dilatation of blood-vessels in the kidney, and a retardation of the blood-current in the glomerular vessels, with possibly consequent alteration in the functions of the glomerular epithelium, also of a temporary nature.

The paper being before the academy for discussion, Dr. William H. Draper spoke as follows: It seems to me, Mr. President, that Dr. Kinnicutt's interesting paper presents two or three points which are especially worthy of consideration. The first of these is the question as to the essential cause of albuminuria. Dr. Kinnicutt has considered this question very fully, and we find that there are various opinions held as to the essential cause of the transudation of blood-serum into the urine. I think that it must be evident to any one who has had much clinical experience, that the theory of blood-pressure is not sufficient to explain the presence of albumen in the urine; for it is certain that we find in health very great variations in blood-pressure, which are not followed by the presence of albumen in the urine. The variation in the quantity of urine in health is considerable, and such variation must coincide with the variations in blood-pressure in the kidney. Again, if transudation were dependent solely upon blood-pressure, I think we should find, in those diseases in which blood-pressure is seriously altered, the presence of albumen in the urine much more constant than it is. We know, for example, that in a contracted kidney, in which we commonly have hypertrophy of the heart, and in which there is a great arterial tension, the presence of albumen in the urine is by no means constant. When albumen does present itself, we also know that it is transient, and in small quantities.

Then, if we take diseases of the heart in which there is obstruction to the return circulation, where the blood-pressure is sometimes very much reduced, and possibly there is congestion of viscera, I am quite certain, from a considerable experience, that the presence of albumen in the urine, under these circumstances, is a very variable phenomenon. You will find, sometimes, that there is considerable congestion of the lungs and a well-marked systemic congestion, and, at the same time, there is no albumen in the urine. It seems to me that hyperæmia alone, whether active or passive, fluxionary or dependent upon venous obstruction, is not a sufficient explanation of the presence of albumen in the urine. I believe that we must invoke some other condition to explain this phenomena. Dr. Kinnicutt, in his paper, alludes to the opinion expressed by German observers, and pretty generally accepted, that albuminous transudation does not take place in the kidney, unless there is destruction or deterioration of glandular epithelium. We know very well, that in the chronic Bright's diseases, especially in the parenchymatous varieties, in which the presence of albumen is most constant and most pronounced, the glandular epithelium is degenerated, and, to a very considerable extent, in the later stages of the disease, destroyed. These diseases, therefore, would seem to furnish proof that this condition is one favorable for the transudation of blood-serum. There is another condition, however, and it is one Dr. Kinnicutt has dwelt upon, which by itself, or, perhaps, by inducing the changes in the glandular epithelium, may give rise to the presence of albumen in the urine. There can be no doubt as to the association of urates and crystals of uric acid and oxalate of lime in the cases of transient albuminuria occurring in adolescents and children; and it seems to me, that if we consider some of the morbid conditions in which albumen is found in the urine, we shall find them corroborative of this suggestion, that the presence of imperfectly oxidized material in the blood may give rise to albuminuria. It is a common observation that the urine of persons suffering from fever may contain albumen. I think it is the rule in pneumonia to find a certain quantity of albumen in the urine; certainly, in typhus fever it is present almost invariably; also, it may exist in typhoid, and, in fact, whenever we have high

temperature and rapid emaciation, and the blood is necessarily loaded with the debris, so to speak, which results from rapid metamorphosis of tissue. Here, then, we have not only the condition spoken of as essential to the presence of albumen—hyperæmia of the kidney—but we have hyperæmia combined with the presence in the blood of considerable irritative matter.

As to the vaso-motor theory, which is the most popular just at the present time, whether it is sufficient to explain the presence of albuminuria in children and in adolescents, I do not know. There is one question which certainly will suggest itself in considering this theory, and it is this: Why, if the imperfectly oxygenized nitrogenous matters produce this temporary albuminuria, by giving rise to vaso-motor paralysis in the kidney, should it occur so seldom, considering the great frequency of such changes in the urine? I suppose all of us have, more or less, lithæmia, and pass urine which contains lithates in abnormal quantity; and yet, I am sure, the occurrence of albuminuria under these circumstances is, to say the least, in adults, and also in adolescents and young children, not a common event. Why is it that in a few cases these changes produce vaso-motor paralysis, while in a great majority of cases such a condition is not produced? You may say that it depends upon a certain vulnerability of the kidney in different persons. This also is a convenient theory. It is true that the skin is vulnerable in some people, and the mucous membranes or kidneys in others; and it is possible that this is a reasonable explanation, but still it does not seem to me altogether satisfactory.

There is one other point to which I will direct attention, and that is the general significance of albuminuria. We have seen, from the cases presented by Dr. Kinnicutt, that albumen in large quantities has appeared in the urine of young children and adolescents, and it has seemingly been a very innocent circumstance. It may be so. I have no doubt that in his cases it was so; but, at the same time, I think it always suggests suspicion of possible kidney disease. I do not believe that it is safe, under any circumstances, where it has occurred not to look upon it with a certain amount of suspicion and interest; but I believe that if we regard this symptom as we should, as only a single one, and if we study it as we

should in connection with other evidence of disease, we shall not often go astray in our appreciation of its true significance. We all know that a heart-murmur is not necessarily an indication of organic valvular disease; and in making this statement I do not allude simply to the ordinary blood-murmurs, but to murmurs which are not to be explained in this manner. By this I mean to say that we do not always consider them sufficient evidence of the existence of organic valvular disease. We should always consider the murmur in connection with other symptoms. So, I think, albuminuria should never be considered by itself, and a false significance attached to it possibly by considering it alone. This leads me to remark, that the only safe, sure and certain way of appreciating the proper significance of the presence of albumen in the urine, is to consider it in connection with an estimation of the functional power of the kidney. We may have transient albuminuria not significant of structural disease; or, at least, only temporary change; or we may have transient albuminuria significant of organic disease, the latter being the rule in the history of the contracted kidney; and, in order to estimate the true value of the albuminuria in both instances, we must estimate the functional power of the kidney. This we can do by estimating the daily quantity of urine and its solids, and in this way avoid error in our appreciation of the significance of the presence of albumen in the urine.

Dr. A. Jacobi: I had the opportunity, Mr. President, to hear only a part of Dr. Kinnicutt's paper, but from what I did hear, and from the general remarks made by Dr. Draper, I have been led to understand that albumen can show itself temporarily in the urine of children and adolescents in apparent health. I should say, from a general point of view, that when albumen appears in the urine, it is due either to a fault of the blood, or to a fault of the muscular apparatus propelling the blood, or to a faulty condition of the blood-vessels, or to a condition of the kidneys. With regard to the blood, I do not believe that it has anything to do with it; as we know that its condition has nothing to do with hemorrhages, which are always due to changes in the blood-vessels or of the heart, or, perhaps, are due to innervation. I shall add nothing to what I have heard already, except one

point, which has, I think, not been alluded to in the etiology of temporary albuminuria; and that is, the condition of the blood-vessels in certain cases. I have seen two patients in whom I have found well-marked albuminuria associated with disease of the blood-vessels. In one instance of hæmoglobinuria occurring in an adult man, who had always been well, but had been exposed for one or two days to cold and wet, it was suddenly noticed that the urine was dark-colored, and it soon became absolutely black. This condition of things passed away in about a week. Some weeks afterward the same thing occurred again, and the patient lost a considerable quantity of blood. The same condition of his urine appeared a number of times at varying intervals. Nothing was necessary to bring the hæmaturia on, except exposure to cold air or rain. I found a number of times when he was apparently well, that his urine showed the presence of albumen, and, at the same time, there was no blood or pus in it. In this case, I regarded the presence of albumen in the urine as certainly due to the diseased condition of the blood-vessels, and primarily so. Cases of this kind have to be explained by the faulty condition of the blood-vessels, in the same way as do certain cases of purpura, or morbus maculosus. A girl, seven or eight years of age, came under my observation, who had been the subject of purpura a number of years. It was not known that she had been a bleeder from birth, nor was there any history of hæmophilia in the family. Purpura first developed at three or four years of age, and with her was quite a common occurrence. She had as many as two or three attacks in the course of a year. Sometimes the quantity of blood lost would be very slight, at other times larger; sometimes the attack would last a week, at other times three or four days, and be attended with the appearance of albumen, without blood or pus, in the urine. It was usually not long after an attack of purpura before she was fully recovered; and when well, there was no blood or albumen to be found in the urine. I judge, from two such cases, that one of the causes of temporary albuminuria is a defective condition of the blood-vessels, which favors the occurrence of hemorrhage; and where there is no hemorrhage, a condition remains sufficient to allow the serum to ooze through the walls of the vessels. This temporary albuminuria should not be

overlooked, and I think that in a few cases it will be found complicated with a tendency to morbus maculosus. With reference to the literature of the subject, I would direct attention to a most valuable article, written by Dr. Ellis, of Harvard College, and published in the *Boston Medical and Surgical Journal*, which contains complete references to everything that has been written upon this subject, up to the date of its publication.

Dr. William H. Thomson: I am not aware, Mr. President, of having made any observations which will quite illustrate the particular class of cases referred to in Dr. Kinnicutt's interesting paper; but I may say that I have had a number of cases of transient albuminuria occurring among children, several of whom I watched carefully, and in which I ascribed the condition exclusively to malarial attacks. I was led to this conclusion first, by observing a case of intermittent hæmaturia occurring in a child three years of age. There was no evidence of purpura, and the hæmaturia lasted two or three weeks, and then distinct symptoms of intermittent fever developed. The intermittent hæmaturia disappeared entirely, but for two years afterward albuminuria made its appearance now and then, and promptly yielded to the administration of quinine. This case led me to examine the urine in others where I suspected malarial infection, and I could produce the notes of at least twelve cases, occurring among children, where there was no hæmaturia, and yet where there was albuminuria; and I have regarded it as temporary, due to a transient renal congestion produced by a malarial affection. My attention at that time had not been especially directed to one of the causes which Dr. Kinnicutt has mentioned, and it may be said that the albuminuria and the hæmaturia in these cases were the result of considerable lithuria, as we all know that that condition is exceedingly common in children from three to ten years of age; but if transient albuminuria is a frequent accompaniment of lithuria, I should regard it as due to a temporary tubal catarrh, produced by local irritation from crystals of oxalate of lime and uric acid, which are of themselves necessarily irritant, rather than to bring in the hypothetical view that it depends upon some affection of the vaso-motor system of nerves. I was very much interested in the paper, and, at the same time, it has served to deepen an impression

which has been growing in my mind for a number of years—which is, that we do not know what the causes of albuminuria are, in the sense of being able to reduce them to one or two principles; that we are constantly brought in contact with cases in which albuminuria occurs without any of the causes which are ordinarily supposed to operate in its production; and, also, we are as constantly brought face to face with exceedingly serious and fatal disorders of the kidney, in which albuminuria has never been a prominent feature of the disease. I say never advisedly. I will mention in illustration two such cases of an opposite kind. In one of them there was transient albuminuria, which afterward became permanent. It occurred in the practice of Dr. Mourraille, by whom I was called to see the patient, in consultation with Professor Flint. A gentleman, about sixty years of age, awakened one night in the summer, suffering from a severe attack of dyspnœa. The attending physician examined the patient's urine, and found it highly albuminous. The doctor then stated that he had attended this gentleman for some weeks, during which time there was albumen in the urine, but that it gradually decreased in quantity, and then entirely disappeared. On one occasion the urine was examined and no albumen was found, and within half an hour the patient had a severe attack of dyspnœa. It was then again examined, and was found to be exceedingly albuminous. Dr. Flint and myself both agreed that the dyspnœa was uræmic in character; and each of us thought it most likely that the patient had had renal disease for some time without being aware of it, and that this was a transient exacerbation, which finally disappeared and then recurred. But I was struck with the fact that there was no tension of the pulse, no change in the condition of the arteries; but that they were much softer than they commonly are in persons of that age. I watched the case very carefully, and the albumen disappeared in the course of eight days. The urine had been examined carefully and repeatedly, and I had made several examinations of it myself; and yet, within ten hours from the last which I had made, I was called to see the patient in an attack of severe dyspnœa, which was followed by free pleuritic effusion on the right side. Here we had all the symptoms of uræmic dyspnœa and albuminuria developed, at one time, within a half

hour; and then intermittent attacks of dyspnœa occurred, and finally a severe attack, with effusion into the pleuritic cavity, and albuminuria within *ten* hours of the last examination of the urine. Finally the albuminuria became permanent, with abundant epithelial and fatty casts, and in the course of eighteen months the patient died; with all the symptoms of chronic Bright's disease.

On the other hand, occurs a case within the present year. A young married lady, always perfectly healthy, became pregnant. The pregnancy progressed without any of the ordinary symptoms. At the end of the six month I began to examine the urine, and found no changes in it, either chemically or microscopically, up to the close of the seventh month and the beginning of the eighth, when I discovered that the specific gravity was falling, while the urine was abundant in quantity. The specific gravity fell from the normal, until it reached 1,010-8-6-4, and yet there was not the slightest trace of albumen. The only other peculiar physical appearance it presented was the absence of color. The simple fact of the diminished specific gravity, made me very apprehensive of an unfavorable termination of the case, and I felt that I should, perhaps, bring on premature labor. The only symptoms from which the patient suffered were slight headaches in the morning, and occasionally some nervousness, but not at all marked. I was called one morning, suddenly, to see this patient in a convulsion, which killed her at once. Not a trace of albumen was found in the urine from the beginning to the end of the case. although daily examinations were made for a month. There were no casts. The only changes in the urine were the lowered specific gravity and the absence of color; and yet the condition was one in which we would very naturally expect albumen in the urine to be present, due to pressure upon the return circulation incident to pregnancy. I mean, therefore, this: a case like the first, that in which a man suffered from attacks of extreme dyspnœa, with transient albuminuria, the attacks of dyspnœa recurring, and the transient albuminuria finally becoming permanent and associated with disorganization of the kidney; and a case like the second, in which a condition occurs which, in accordance with the mechanical theory, is supposed to be dependent upon pressure, and yet there is no albuminuria whatever, only sustains me in the belief

that we have not yet reached the ultimate cause of albumen in the urine. In both of these cases we have theories contradicted by clinical experience; and, hence, I do not see that we have yet a single explanation of albuminuria which is satisfactory in anything more than a certain proportion of cases. On that account none of our hypotheses rise higher than mere hypotheses, else we should not have these extraordinary exceptions to them. I do not see how we can appeal to vaso-motor paralysis, either transient or permanent, to explain the presence of albumen in the urine; for we have many cases of vaso-motor paralysis in which there is no albumen in the urine. So, again, with regard to increased blood-pressure: when it is presented to us in its typical form, in the high tension of the pulse in the granular kidney, it is usually not accompanied with abuminuria, but the reverse.

Dr. E. C. Seguin, in support of the theory advanced by Dr. Kinnicutt, that uric acid and oxalate of lime and urates produce irritation of the kidney, and in a reflex way cause vaso-motor paralysis of the associated vascular system of the organ, referred to a classical experiment performed by Ranvier, twelve years ago. It consisted in tying the vena cava ascendens of a dog, following which there was no œdema observed in the lower extremities. He then cut the sciatic nerve on one side, and there ensued an œdema of the paralyzed member, the other limb remaining normal. This experiment would go to show that a vaso-motor paralysis was necessary to transudation of the liquid elements of the blood into the tissues. The same result has also been obtained in attempting to produce Basedow's disease experimentally. It was found that neither ligation of the internal jugular veins, nor yet section of the sympathetic nerve, when done separately, produced it; but it was left for a pupil of Donders, Boddaert in 1872, to show that by a combination of the two operations a very remarkable resemblance of the disease is produced, including projection of the eyeball. If now we take into consideration, on the one hand, the clinical points in connection with the contracted kidney, as well brought out by Dr. Draper, the high arterial tension, which is characteristic and yet no transudation of the albumen; and, on the other hand, the fact that where blood-tension is lowered from renal

or general disease, and albuminuria exists, these two sets of facts, with the experiments above referred to, rally considerably in support of Dr. Kinnicutt's explanation, and do not interfere with that given by Dr. Jacobi. It may be that the lesion of the blood-vessels, to which he refers as the cause of the transudation, is relaxation and separation of their muscular cells through vaso-motor paralysis.

Dr. E. Bradley referred to cases of temporary albuminuria occurring in young persons addicted to the excessive use of cigarettes.

Dr. Jacobi: I did not mean to say that my explanation was for every case. It was simply put forward as one of the causes of albuminuria.

Dr. Kinnicutt, in closing the discussion, said he had endeavored to show in his paper that albuminuria could not be explained on the ground either of high or low arterial tension alone. He had also endeavored to show that filtration of albumen through an animal membrane is a comparatively slow process; that a condition of such filtration is, that the albumen remains a comparatively long time in contact with the wall of the vessel, and such prolonged contact can be obtained only by retardation of the blood-current. He had suggested that such retardation was brought about by disturbance of the vaso-motor system within the kidney. He also stated that he did not claim that his explanation was sufficient for all cases of albuminuria occurring in children and adolescents; he believed that its more frequent occurrence then, than at a later period of life, was due to the greater mobility of the nervous system which obtained at these periods. The explanation asked by Drs. Draper and Thomson, of the occurrence of a temporary albuminuria in only a small proportion of cases of lithæmia in children and adolescents, he thought might be found in the supposition of an *individual* mobility of the nervous system in such cases. In this connection, he would ask them the explanation of the comparative infrequency of general nervous symptoms in cases of lithæmia—symptoms which were well recognized as occurring in a certain number of such cases. Again, why it was that one individual developed an eczema or an urticaria, and another an affection of the mucous membranes under such circumstances?

The absence of structural change in the glandular

epithelium, it seemed to him, was demonstrated by the very transient nature of the albuminuria in the cases which he had observed and reported. He had suggested, as one of the factors in its production, a *temporary disturbed nutrition* of the epithelium, dependent upon altered nutrition, also of a temporary nature. If Nussbaum's conclusions were accepted, and they had been reached by a careful series of experiments, that the glomerular vessels were the seat of the transudation of albumen, then the suggestion offered by Dr. Thomson, that in these cases there is transient tubal catarrh, would not apply. Dr. Thomson had also spoken of the absence of albuminuria in the case of ophthalmic goitre. A number of cases, however, had been observed, in which the albuminuria had only appeared with the development of this affection, disappearing with its cessation. To determine whether albuminuria was present or not in a case of exophthalmic goitre, it was necessary to examine the urine not only every day, but at different times in the same day, as in the cases reported. The fact had been brought out very prominently that a great variation in its occurrence was the rule. Cases of this kind had been reported by Dr. Begbie, and corroborated by Dr. George Johnson. —*Med. Record.*

Antiseptics in Ovariectomy.

DR. KEITH and Dr. Bantock, of London, have both renounced the use of the spray in ovariectomy, and returned to the old system, pure and simple, with the best results (*Lancet*, Sept. 24, 1881). The latter observes:

"If we are to accept the experiments of Mikuliez, the spray must be injurious, inasmuch as he has found that the spray contains four times as many bacteria as the undisturbed air of the room, and that as these bacteria are dry and not in a state to be acted upon by the carbolic acid, they thus gain access to the peritoneal cavity uninjured and ready for their dire work. But we may rest in peace on this account, seeing that the living tissues are able effectively to dispose of them provided they be deprived of appropriate nidus by using a drainage-tube."

The drainage-tube is thus a necessity in those cases

where the spray is used, whereas it may be dispensed with in many where it is not employed.

THE ANTISEPTIC TREATMENT OF WOUNDS IN WAR.

This was the subject of a paper read before the International Medical Congress, by Surgeon-Major H. F. L. Melladew, M.D. This paper was chiefly founded on the reports made by surgeons who had served in the Russo-Turkish war. The more rigorously antiseptic principles were followed out on the field of battle, at the dressing stations, and at the hospitals, the better were the results. The work of the surgeon was much simplified, for there was no necessity for frequent renewal of the dressings, and more time could be given to the severe cases. The wounded could be more rapidly removed, and were carried to the rear of the battle-field, and, if thought advisable, to their homes, in much more favorable conditions than under the ordinary plans. Convalescence was much more rapid. The author quoted the authority of Reyher, Cassimerer, Pirogoff, and other surgeons, in favor of the use of antiseptics in war. Bergmann had successfully treated gunshot fractures of the knee by at once washing the limb with a solution of carbolic acid, and then wrapping it in cotton dipped in a solution of salicylic acid (10 per cent.). This cotton was covered in with gutta-percha, and the limb was rendered immovable by plaster-of-Paris. In several of the cases, the wound was found to be healed the first time the dressing was removed. The author insisted on the importance of not attempting to examine the wound by the sound or the finger, and quoted Langenbeck in support of the principle, which was followed by most of the Russian surgeons in the war. The experience of the Russian surgeons had shown that septic wounds could be rendered aseptic, even though a fortnight had elapsed since their infliction. This had been proved by Cammerer at Plevna, and by Watraszewski in the Caucasus. In conclusion, Dr. Melladew described a packet of dressing which, he said, every soldier should carry sewn in his coat below the clavicle. He objected to metallic cases, because they might be injured by pressure, and if a ball struck them, they might act as foreign bodies. He recommended a case of linen impregnated with caoutchouc, containing a triangular bandage, a piece of antiseptic lint about eight inches long by three inches

wide, and a gauze bandage, one yard long, enclosed in parchment paper. The packet was very cheap, easily prepared, and small.

A SIMPLIFIED ANTISEPTIC DRESSING.

In the *Gaz. Med. de Strasbourg*, 1881, No. 3, E. Boeckel describes a modification of the antiseptic method of dressing wounds, which he claims to be cheaper, simpler, and more generally practicable than the "Listerian" method. The dressing used is red tarlatan cloth which has been steeped for eight days in a solution composed of

Ry.	Carbolic acid,	. . . . .	3 pts.
	Glycerine,	. . . . .	5 "
	Alcohol,	. . . . .	5 "
	Water,	. . . . .	50 "

in a tightly-covered vessel. In urgent cases, as in military practice, one or two hours' steeping might be enough. The cloth is applied wet, and just before being used is dipped into tepid water to get rid of the excess of acid. Boeckel seeks to obviate the irritating effects of the acid on the skin, and also the risk of carbolic poisoning, by interposing between the skin and the carbolized tissue a layer of tarlatan wetted with plain water. The margin of the dressing is rendered secure against admission of air by strips of wadding, the whole is covered with some impermeable material, and fixed with a firmly applied damp bandage. The impermeable material may be gutta-percha, paper, parchment paper, or oiled paper.

The spray is only used in operations when serous cavities or joints are opened. In other cases, frequent flushing of the wound with antiseptic fluid is considered sufficient.

The author used this in sixty consecutive cases of major operations—*e. g.*, amputations, excision, and incision of joints, and laparotomy, and among these were only two deaths, but in both cases the parts were "septic" before operation.

IODOFORM IN UNHEALTHY WOUNDS.

At the Surgical Congress held last spring, in Berlin, a discussion of the value of iodoform in surgery was an interesting feature. In Vienna, especially, the use of iodoform as a dressing of unhealthy wounds has long prevailed, but now it is used somewhat differently, and much

more thoroughly. In joint diseases, caries, cold abscesses, etc., the diseased bone, fungous granulations, and other abnormal tissues are removed with knife or curette, the cavity thoroughly washed out with carbolic acid or thymol, and *entirely filled* with iodoform. A usual dressing of gauze and Mackintosh is then applied over all, and the part immobilized by means of an argentine bandage. Unless the discharge soaks through the dressing it is not removed for one, two or even three weeks. The results obtained have been remarkably good, cases having been cured that would have been amputated under the older methods of treatment. The iodoform diminishes the secretion, prevents its decomposition, and prevents the formation of tubercle in the granulations or destroys them if they are already present. This specific local action on tuberculous granulations has been repeatedly observed, portions of the tissues being examined microscopically before and after its use. This may easily be observed where the granulations have not been first removed.

This observation of the action of iodoform upon tuberculous masses with which it is in contact, led to the trial, in Professor Billroth's clinic, of injecting an ethereal solution of iodoform into joints in the early stages of fungous inflammation, and into other suspected tuberculous swellings. A solution of iodoform in ether, one part to five, is injected with a hypodermic syringe directly into the joint or tumor in several places, one or two syringefuls being used. The ether is immediately absorbed, and the iodoform is left in substance in contact with the diseased tissues.—*Med. and Surg. Reporter.*

The Medical Uses of Carbolic Acid. The Antipyretic and Diaphoretic Action of the Acid and its Soda Salt.

M. RAYMOND read a paper on this subject at a recent meeting of the Societe de Biologie. The following abstract of the paper and of the discussion to which it gave rise, we take from *Le Practicien*, of September 12:

M. Raymond's investigations had especial reference to the use of the carbol preparations in typhoid fever. He administered the acid in the dose of one gramme a day, half of which was given by enema, and the other half was made into three pills, which were taken at intervals

of some hours. The temperature usually fell several tenths of a degree during the first hour, and it often fell in a few hours three or four degrees. This depression of temperature, however, is only temporary; and, in order to be made efficacious, the medicine has to be repeated every day, without, however, any increase in the dose. Whenever as much as two grammes a day was employed, symptoms of poisoning supervened; such as black urine, extreme coldness, convulsive tremblings, etc.

By the advice of M. Velpeau, M. Raymond had also tried the carbolate of soda, in the dose of $1\frac{1}{2}$ grammes a day. The results were precisely similar to those obtained by the acid, and it had the advantage over the latter of being harmless. It was given in divided doses at intervals through the day. Simultaneously with the lowering of the temperature, carbolic acid produces in a short time a profuse diaphoresis; and the question suggested itself, whether the depression of temperature might not be due to this, rather than to any special and direct action of the carbolic acid on the heat formation. In order to decide this point, M. Raymond injected under the skin one-fourth of a milligramme of duboisine, and thus suppressed the perspiration; but the abatement of temperature occurred just as in other cases. The acid thus diminishes heat production and does not increase the heat loss to any great extent. It does not modify the course of typhoid fever.

In mild cases of erysipelas, carbolic acid, applied externally and used as an injection, answered well; but when the disease was of severe form, it was found to be without value.

The febrile movements of pulmonary tuberculosis are not modified by carbolic acid.

M. Hallopeau spoke very favorably of the action of carbolic acid in typhoid fever. He added, also, that in many cases of this disease, he had found alternate doses of salicylate of soda and quinia to exert a very decided antipyretic action.

[The translator has found that three or four 15-grain doses of salicylate of soda, at intervals of an hour, and followed an hour after the last dose by fifteen grains of quinine, exerts a most decided antipyretic action, and suggested this method of administration in the *Virginia Medical Monthly* for December, 1878.]

M. Dumontpellier said that the method of reducing the temperature by the application of cold externally, was far preferable, in his opinion, to the administration of carbolic acid; because the fall of temperature, when external cold was employed, was progressive and lasting.

M. Hanot reported two cases of typhoid fever, in which the administration of carbolic acid had a most favorable effect; in both, there was a reduction of more than three degrees in the temperature, and the patients were well—one in sixteen and the other in fourteen days. At the time of the defervescence of the fever, there was an eruption of vesico-pustules, in which the microscope showed myriads of bacteria.—*Va. Medical Monthly*.

Action of Iodoform in the Treatment of Wounds, and its Influence over Fungous Processes.

A PAPER with this title was read by Dr. Mikulitz before the k. k. Gesellschaft d. Aerzte, in Vienna, recently, and was subsequently published in the *Rundschau* for September, 1881.

Dr. M. had studied, in connection with Pannet, the antiseptic action of iodoform, and found that while the drug was not a very powerful antiseptic, its action was constant; and that, after the addition of some of the powder to urine, blood, or other discharges, decomposition did not take place, nor were any bacteria developed.

The mode of application is very simple. Fresh wounds, or those which had already undergone some change, as well as ulcers, abscess cavities, fistulous passages, etc., were sprinkled with the powder, over which was applied a simple bandage. The addition of one drop of oil of bergamot to ten grammes of iodoform greatly lessens the unpleasant odor. In certain cases it was found convenient to make little rods of gelatine, gum or cocoa butter, to which iodoform had been added in the proportion of one gramme of iodoform to ten of the vehicle; or, it might be dissolved in ethereal oil and injected into the tissues. The first method, however, is much the most convenient, and was the one usually employed.

The number of cases subjected to this treatment was nearly 200, and they were divisible into three categories:

1. Fresh wounds; 2. Wounds infected with septic matter; 3. Those having a tubercular basis, such as caries and fungous processes.

In the first class were included such wounds as those caused by castration, extirpation of tumors, and removal of the breast. In these cases there was no general reaction, no fever, very little swelling, never any decomposition of the secretions from the wounds, and, consequently, no danger of the absorption of septic matter. Healing took place rapidly.

By this simple method of treating wounds, Dr. M. thinks that military surgery will be robbed of many of its dangers and inconveniences. In wounds about the mouth, such as that caused by removal of a cancerous tongue, for instance; or wounds of the vagina or rectum, or such as communicate with the peritoneal cavity, a little bag of muslin filled with iodoform and placed over the wounded surface, will cause it to pursue an aseptic and non-febrile course. The same is true of ulcers and phagadenic processes. Most unexpected and favorable results have been obtained from the local use of iodoform in those diseased conditions having a tubercular origin. In caries of the joints with fungous granulations and fistulous passages of long standing, a complete cure was obtained by freely exposing the granulations, and then filling the cavity of the joint and the fistulous passages with pulverized iodoform. The action on the fungosities seems to be entirely a local one, and it is necessary that the powder be applied directly to the diseased surface. In one case, when death occurred from pulmonary tuberculosis during the treatment, it was found that new granulations were springing up near those which were destroyed by the iodoform.

Unfavorable results were obtained in two cases. These were delicate children who had suffered a long time from caries, who died with symptoms which were supposed to be due to poisoning by iodoform. They improved for three weeks and then were taken with prostration, great restlessness, loss of appetite, vomiting, dilated pupils and inability to stand, though there was no distinct paralysis. The autopsy gave a negative result; but Prof. Leyden found in certain organs a fluid containing iodine, which exerted a toxic action.—*Va. Medical Monthly*.

MICROSCOPY.

BLUE GLASS FOR TEST OBJECTS.—E. Mauler mounts diatoms intended as difficult tests on or under blue glass. The object is twofold: 1st, to render the image clearer by monochromatizing the light entering the objective. In this case it is the cover glass only which is blue, and it "has the effect of improving the often confused resolutions given by objectives whose chromatic aberration is badly corrected." 2d, by using blue glass for the slide, or for the bottom of the cells, the light reaches the object monochromatized, a plan which replaces the more inconvenient one with sulphate of copper. Stronger illumination, of course, is more necessary than with ordinary glass.

High Magnifying Powers.

[The following, taken from the *American Jour. of Mic.*, expresses our own views so well that we copy it.—
ED. MEDICAL. NEWS.]

A recent number of the *Journal of the Royal Microscopical Society* says: "In America, more than one professed microscopical expert—notably, Mr. John Phin, Editor of the *American Journal of Microscopy*, and Carl Reddot's—has lately alluded to 80,000 or 100,000 diameters as within the power of his appliances," and the tone of the article would seem to imply that we advocate and use such high powers, although this is not expressly stated.

Speaking for ourselves, we would say that we have never used such powers, do not believe that any useful result is to be gained by them, and in all our writings we have opposed their use. It is true that we have experimented in this direction just to see how poor the results would be, and we have recorded the attempts of others, as a matter of news. But we are no advocates for such high powers, and never use them.

That a certain magnifying power is necessary in every case to enable the eye to appreciate what the microscope pictures, is a truth which only needs to be stated to command assent. The man who tries to see the lines of *P. angulatum* with a power of 100 diameters will fail—no

matter how good his objectives may be. But our power to obtain amplification is limited, and we believe that the limit of effective work falls far below 80,000 diameters.

It is now pretty well recognized that very high power objectives do not reveal anything more than those of moderate power, it being assumed that the latter are of first-rate quality, and used with high eye-pieces, and the question comes up: "How high may the eye-piece be?" Our own impression is that the same circumstances which prevent the successful construction of high objectives will prevent the construction and employment of high eye-pieces. Just where the limit lies it may be difficult to state, but we doubt the efficiency of any eye-piece higher than one-eighth. This, with an objective of one-tenth, would give 8,000 to 10,000 diameters, and this seems to be about the limit arrived at by our best workers.

GLEANINGS.

TREATMENT FOR CERTAIN KINDS OF INCONTINENCE OF URINE IN WOMEN.—By J. Milne Chapman, M.B., M.R.C.S. (*Edinburgh Medical Journal*):

Mrs. C., aged forty-eight years, had frequent and painful micturition that had lasted three years and a half. When first ill a doctor told her she had inflammation of the bladder and some urethral affection (caruncle?), for both of which he treated her. September 30, 1880, could only retain water half an hour. The pudenda were reddened, also the whole vagina. Urethra somewhat gaping at its outlet. There was considerable pain on rubbing the two walls of the bladder over one another, or on introducing the sound into the viscus. Urine turbid, acid, and contained pus-cells, bladder-epithelium, and some oxalates. Urethra was dilated by the finger, increasing the bladder's retaining limit to an hour and a half. *Nux vomica* and *uva ursi* were given, and the vaginitis treated by sedative applications. Effects of the dilatation disappeared in about three weeks. It was then repeated, but soon she relapsed into her former condition, minus, however, the pain and pus in the urine. Urethra examined by endoscope and a slight redness noticed. Iodoform

bougies were used. Condition of bladder-wall as seen by the endoscope was normal, and now (November 8) every hour, night and day, she has to empty her bladder. Total quantity of urine fifty ounces, which gave little more than two ounces at each micturition. Sound passed into the bladder three inches from external meatus, and could only be pushed half an inch farther, and thus pain was caused.

It occurred to me that gradual forcible dilation of the bladder might relieve the patient. The bladder was distended with warm two-per-cent. carbolic solution, and the quantity used measured four ounces. Any attempt to inject more caused the most intense pain, and the resistance was great, as could be felt in compressing the ball of the syringe. From this date the bladder was filled to distension daily, injection being stopped when pain became great and resistance reached a high point. The apparatus used was Higginson's syringe attached to an ordinary catheter, great care being taken to prevent the access of air to the bladder. Each day there was a gradual increase in the amount injected of from a dram to an ounce. On two or three occasions the fluid as it returned was tinged with blood, but no harm ensued.

December 20 she was discharged. Instead of micturating every hour, she had only to get up once or twice during the night. Sixteen ounces could now be injected, and less pain was caused, than when four ounces was the limit. Two months later she was as well as when she left the hospital.

It will be seen that the woman had a cystitis, with frequency of micturition, which latter remained after the former was cured; that any indication there was for further treatment was attended to either medicinally, topically, or by operation, but that still the frequent micturition continued; that the bladder was then found smaller than normal, both by measurement with the sound and by the much more certain method of measuring its capacity, and that this capacity was increased fourfold by what may be called *slow operative dilatation of the bladder*, and that the results were in all respects satisfactory. There has this week presented itself at the infirmary a case of cystitis, where the bladder capacity is three ounces, and we propose soon to begin dilatation.

AMYL NITRITE IN OPIUM POISONING.—By E. F. Turner, M.D., Strayhorn, Miss. (*St. Louis Courier of Medicine*):

I was called August 16, 1880, to see ———, who was drunk and had been in the lock-up about three hours. I was told by the marshal that he looked like he was dying, but he thought he was "playing off." I found him as pale as a corpse, with heavy breathing; the respiration would intermit; it was three per minute one minute and two the next; the pupils extremely contracted; pulse not perceptible at the wrist; his eyes were set in his head about half open and perfectly insensible (I tested them with the end of my finger). I asked if he had had any chance at opium or anything of the kind, and was told he had not. I searched diligently but did not find any clue. I was not certain as to what was the matter, but it struck me that if nitrite of amyl would speedily increase the heart's action and dilate the capillaries it would do away with two of the bad symptoms. So, with one hand on the wrist, I began administering it. I first let him take two full inspirations, and had the pleasure of feeling his pulse at the wrist. I waited a short time; the pulse began to grow feeble. I applied it again, and this time his skin became red; his respiration ceased to intermit. I sat by him and gave it at intervals, watching the effect. At the end of one hour his respiration was eight; at the end of one hour and a half he opened his eyes and swore a few times; at the end of two hours he was so much better that I stopped the remedy. He was in a profuse perspiration, sat up and urinated. At the end of three hours he was able to be carried home by his friends. Subsequently he came into my office and told me that on the day he took his spree, when he started to town, he took about eight times as much morphine as the usual dose (he had taken morphine and quinine the week before for neuralgia), and brought about the same amount to town with him, which he took about the time he was locked up.

I was called January 22, 1881, to see an infant six months old. The mother through mistake had given it one-fourth grain of morphine at 12 o'clock and repeated it again at three. I arrived one hour and a half later, found the child well under the narcotic, so much so that I told the mother the case was very doubtful. I took the usual steps to relieve it, and remembering my other case

I commenced the use of amyl nitrite with the same caution as before, and again had the pleasure of seeing its immediate effects; every inhalation acted like a charm. I remained with the child six hours, when it was relieved and I left for home.

CHRONIC BRIGHT'S DISEASE WITHOUT ALBUMINURIA.—The main object of the paper was to prove that high arterial pressure, in young and apparently healthy persons, if it remain as a chronic condition, will produce the cardio-vascular changes of Bright's disease. It was held that the changes found in red granular kidneys are chiefly vascular in their nature; *i. e.*, thickened vessels, thickened Malpighian capsules, and fibro-hyaline intertubular thickenings; the yellow, or mixed granular kidneys, have, in addition to these, interstitial small celled growth and epithelial proliferation. Chronic Bright's disease was described as existing typically in three stages: 1. The functional stage, *i. e.*, high arterial pressure without organic change; 2. Chronic Bright's disease without albuminuria (or nephritis), *i. e.*, the cardio-vascular changes, usually with red granular kidney; 3. Chronic Bright's disease with albuminuria, or urine of low specific gravity, *i. e.*, the cardio-vascular changes with the mixed or yellow granular kidney. The present paper was to prove the existence of the second stage without albuminuria. It was founded upon sixty-one cases, in nearly all of which the urine was ascertained to be perfectly normal in quantity, specific gravity, and the absence of albumen, the latter being only occasionally present just before death. Nearly all these cases were diagnosed during life by hypertrophy of the heart and high arterial pressure. Of these, twenty-one cases were fatal, and an account of the *post-mortem* examination of each was given; in all the others, the signs were unmistakable, there being in all displacement of the apex external to the nipple-line, and high arterial pressure; in many, evident thickening of the arteries, and other occasional signs. The cases were grouped as follows: cardiac failure, ten cases with eight deaths; lung-failure, eleven cases, six deaths; cerebral disease, nine cases, two deaths: renal dropsy, nine cases, one death; gout, six cases; epistaxis, three cases; various medical and surgical diseases, nine cases, four deaths. There were also four cases with well-marked albuminuria,

disappearing temporarily or permanently. The twenty-one fatal cases included five in which there was hypertrophy of the heart without valvular disease; in all, the vessels were thick, but there was little or no renal change.—*F. A. Mahomed, M.D., London, in British Medical Journal.*

HOW TO USE THE BROMIDES.—In an article on the above subject, which appeared in the *Journal of Nervous and Mental Disease*, for July, 1881, Dr. Geo. M. Beard, who, as we all know, is an advocate of heroic (30 to 100 grains, or more) doses of this drug, says:

In epilepsy, the necessity of giving doses of considerable size is recognized more and more; but it is not generally allowed, even by neurologists, that in neurasthenia or hysteria doses of even greater size are admissible, proper and necessary, if we would get the results we seek.

In many cases a single large dose of bromide, say 100 or 120 grains, or even a larger amount, given in a tumbler of water, may be sufficient of itself, without any repetition, in any quantity, to break up an attack of hysteria, or sick headache, or sea-sickness; whereas, the same case in the same condition, treated by divided doses of the same remedy, might not be affected at all.

It sometimes seems to be necessary to overwhelm the nervous system with the sedative effects of the bromide, in order to get bromization.

Although no fatal cases have occurred from these immense doses, dangerous symptoms have been produced by a single dose of 100 grains. Patients taking bromides should, therefore, be closely watched; and, if the medicine has to be continued for any length of time, it should be alternated or combined with tonics, as *nux vomica*, or, in some cases, *ingluvin* and *arsenic* in small doses, to act on the stomach.

ASPIRATION OF THE BOWELS IN PERITONITIS.—A successful instance of this measure is reported by Dr. D. M. Williams, in the *Dublin Journal of Medical Science*. The patient was a boy of thirteen. We quote the most interesting part of the history:

His condition was now alarming; the pulse was, for the first time, irregular and compressible—144 to the minute; breathing very shallow; eyes sunken; cheeks

hollow; tongue dry; constantly moaning with pain—evidently dying. He placed his hand on the epigastrium, and said the pain was smothering him, no doubt from pressure upward of the diaphragm interfering with the action of heart and lungs. The abdomen was arched from the xiphoid appendix to pubes, the least attempt at percussion causing great agony. Had not passed water since the 7th. I determined to aspirate him, and passed the finest needle into the transverse colon; and, on turning the tap, a great quantity of flatus rushed through, followed by three ounces of fluid fæces, which gave him great relief, but did not perceptibly diminish the size of the abdomen. Fearing the needle was blocked, I withdrew it, and found such was not the case. I had evidently emptied this portion of the colon. Having washed the needle, I pierced the ascending colon; another rush of flatus took place, followed by eight ounces of fæces. I repeated the operation on the descending colon, with the same result. There was now very decided diminution of distention and relief of pain; still he complained bitterly of a spot just below the navel, which was quite tympanitic. Taking care to avoid the bladder, I pierced probably the ileum; more flatus escaped, with about half an ounce of fluid fæces. He was now much relieved; pulse had fallen to 96; breathed deeper. 10 P. M. Much the same as after the tapping; expression of face less haggard; pulse 120, full and soft; temperature 102°; passed water freely, and without pain, an hour after the tapping. To take pulv. Doveri, gr. 10, h. s. From this time, his progress toward recovery was steady.

ANTISEPTIC TREATMENT OF ABSCESS.—Dr. Lucas Championniere recommends, in the *Union Médicale*, the following procedure:

Before opening an abscess, in whatever region it may be placed, we should carefully wash the skin, especially if it has been covered by a poultice, with a strong carbolic acid solution:

R. Acidi carbolicæ,	50 parts.
Glycerini,	75 "
Aquæ,	1000 " M.

The bistoury should also be dipped in the solution. The contents of the abscess are to be discharged, and some of the above solution injected, care being taken

that the injected liquid has a free issue. The end of a caoutchouc tube is introduced into the wound, having a thread attached to it to facilitate its removal; and it is then covered by a thick layer of charpie, impregnated with a solution of carbolic acid twenty-five parts, glycerine twenty-five parts, and water one thousand parts. Finally, over all is laid a layer of gummed silk. At the end of twenty-four hours the tube is removed, in order that it may be cleansed and shortened; when it is again covered with the charpie, moistened with the weaker solution. Under this treatment the amount of suppuration is diminished, the redness of the wound becomes insignificant, and the cicatrices which result are much less apparent. Dr. Lucas recommends this procedure especially in abscess of the breast.

THE CLINICAL VALUE OF THE EXAMINATION OF THE URINE IN BRIGHT'S DISEASE.—The subject was discussed under the following head: (*a*) Quantity: Diminished: 1, in inflammation (early stage and during exacerbations). Normal: 1, in middle stage of inflammation; 2, in earlier stages of cirrhosis. Increased: 1, in waxy throughout (unless interfered with) and preceding even the albuminuria; in cirrhosis—later stage; 3, sometimes in advanced inflammation and during absorption of dropsies. Suppressed: In inflammation acute and advanced cirrhosis: (*b*) Specific gravity and solids. Influenced: 1, by amount of water; 2, by amount of urea; 3, by amount of other solids; urea in different forms. (*c*) Albumen, serum-albumen, the only very important form; quantity in different forms; explanations. (*d*) Blood. 1, Early inflammation and acute exacerbation; 2, very rarely in waxy kidney; 3, occasionally in late cirrhosis with other hæmorrhages. (*e*) Tubecasts; varieties; different views as to the origin; abundant and varied in inflammation; few in waxy kidney; few in cirrhotic kidney.—*T. Grainger Stewart, M. D., Edinburgh.*

EAR AFFECTIONS IN CHILDHOOD FROM DENTITION OR A CARIOUS TOOTH.—“A considerable portion of the blood supply of the membrane of the drum is derived from an artery that leaves the internal carotid in the carotid canal and proceeds by a very short course directly to its destination. Being thus closely connected with a large arterial trunk, this small tympanal branch of the internal

carotid possesses very favorable circumstances for a speedy augmentation of its blood supply. The nervi vasorum constituting the carotid plexus at this part of its course come largely from the otic ganglion. On the other hand, the inferior dental nerve supplying the decayed tooth, or the gums, as the case may be, also communicates with this ganglion. We thus arrive at a direct channel of nerve communication between the source of irritation of the tooth, and the vascular supply of the drum head.

EUCALYPTOL IN ALBUMINURIA, Wm. B. Hazard, M. D.—Prof. Louis Bauer, M. D., has been for some time investigating this comparatively new drug, and has kindly furnished the particulars of a case which was also under my own observation.

CASE.—A gentleman, aged forty-five, was for several weeks engaged in the reconstruction of a building, and was thus constantly exposed to sewer gas. Very soon he was attacked with a pronounced form of malarial fever and total disarrangement of his digestive apparatus.

When at last the patient came under our observation, moderate ascites and anasarca had been superadded. The general appearance of the patient denoted hydæmic cachexia. The pallor of his skin was somewhat changed by a yellow tinge; liver and spleen enlarged, but not tender. The vital functions were sluggish throughout; stool and urine scanty. The microscopic examination of the latter did not reveal any evidence of renal disease, but on the proper test precipitated a large quantity of albumen. Aside from these symptoms, the patient was at no time entirely free of fever, as indicated by the increase of temperature and pulse; but there were exacerbations of a very marked tertian type, which terminated without the usual supplementary critical discharges. The skin was altogether inactive.

The first object of treatment was to arrest the febrile disturbance with large doses of quinine. This was only partially successful. The percentage of albumen augmented. Moderate purgation had no effect in giving relief. Hot air and variously medicated baths did not change the inaction of the skin. Various diuretics failed to increase the urinary secretion. It occurred to me to employ the diuretic action of eucalyptol. It was pre-

scribed in the shape of an emulsion, and the dose gradually increased from five to fifteen drops four times a day. From the start, the patient realized the beneficial effects of the remedy. Above all, the albumen in the urine steadily diminished, and at the end of ten weeks' use of this remedy the patient was completely relieved of his dropsical symptoms. Repeated examinations of his urine have since been made, but not the slightest trace of albumen has been discovered.

Since then, Dr. B. has treated two other patients in similar but less aggravated conditions, with eucalyptol, and accomplished the same prompt and enduring benefits. —*St. Louis Clinical Record.*

MYSOPHOBIA.—The following report by J. C. Shaw, of Brooklyn, is from the *Archives of Medicine* for October, 1881:

E. J., aged fifteen, brought to me by his mother on May 26, 1879. For the past few years has enjoyed good health. About six weeks ago the first decided symptoms appeared, but for months before his mother had noticed that he was excessively particular to wash his hands very clean, which is unusual for boys, as she remarks. About six weeks ago he began to say to her that he had been touching the paint; did she think it would come off the wall and poison him? He would not take off his own hat, but ask her to do it for him; also to unbutton his coat. If he wished to come in the front door he would not take out his night-key and come in, but would knock on the door with his elbow. He is afraid that if he touches anything with his hands it will poison him. Every time he touches *anything* he is very particular to wash his hands very clean. He spat on the carpet a few days ago, and then rubbed it off with his boot. He immediately came down stairs to his mother, told her about it, and asked if she thought he could have got any of the color off the carpet so as to poison him. He would go about holding his hands and arms away from his body as if he were afraid of touching his clothes. When he goes to bed at night he will wash his hands a dozen times and use as many towels. If prevented from doing this he appears disturbed, and will sometimes rush over to the water-pitcher and thrust his hands in, which appears to satisfy him. For a short time past he has frequently asked his

mother if he had cobwebs on his face, and especially about his mouth. His mother thinks that of late he has presented a vacant, idiotic expression that he never used to have.

When the boy is talked to he speaks sensibly, but will give no explanation of why he is afraid of being poisoned by touching things; says he has frontal headache at times, especially when he goes to school; for the past six weeks has not gone to school, and has not had the headache, but a few days ago had a sharp pain in left occipital region. He looks dull and apathetic; is not given to self-abuse. He has a decided neurotic family history. The brother and father of his mother suffered from some nervous disorder, but no accurate account of it could be obtained; but I infer that it was a mental disorder. The marked neurotic family history in this case inclines me to the opinion that graver mental disorder will be developed in this boy.

RIBEMONT ON TARDY LIGATION OF THE UMBILICAL CORD.—Dr. J. G. S. Coghill, in his address in Obstetric Medicine before the British Medical Association, called attention to an extremely interesting and valuable communication with reference to the time and mode of separating the foetus and umbilical cord which had been made by Ribemont in a recent number of *Les Archives de Tocologie*, and which shows satisfactorily the great influence of the "thoracic aspiration" of the foetus on the umbilical circulation before its ligation. This was first pointed out by Budin, but is denied, among others, by Schucking. Determined by the manometer it was found that—

1. Tardy ligation of the cord benefits the child by increasing the quantity of blood which is required for the establishment of the third circulation—that is, the foetal pulmonary.

2. The immediate ligation of the cord deprives the infant of a quantity of blood, larger or smaller in proportion to the time of ligation; and it especially deprives it of necessary blood if the ligation has been applied before the child has breathed.

3. The early ligation of the cord thus compels the abstraction of the blood necessary to establish the pulmonary circulation from the general circulation. The result is a diminution of the arterial tension equal to one-third of the initial tension.

4. The cause of the penetration of the blood into the pulmonary circulatory system of the child is the "thoracic aspiration." This is proved by the constant superiority of the pressure of the blood in the umbilical arteries to that in the umbilical vein. Again, the thoracic respiration is observed to produce considerable oscillations in the tension of the arterial and venous blood. The uterine contractions are utterly insufficient to force any blood along the umbilical vein when the arterial pulsations of the cord have ceased.

5. Thoracic aspiration causes the *sufficient* and *necessary* amount of blood to enter the pulmonary vessels; *sufficient* because under these circumstances the tension in the arterial system does not fall; *necessary* because the arterial tension in the umbilical cord of a newly-born child is never seen to rise after tardy ligation of the cord.

Prof. W. T. Lusk, of New York, in corroborating Ribemont's views, says that in children born pale and anemic, and suffering from syncope, late ligation of the cord furnishes an invaluable means of restoring the equilibrium of the foetal circulation.—*British Med. Journal*.

RODENT ULCER AND EPITHELIOMA.—Rodent ulcer and epithelioma are undoubtedly closely allied affections, though rodent ulcer differs in some important respects from epithelioma. It does not affect lymphatic glands while epithelioma does, and often at an early stage of the disease. It is a rather dry ulceration with only a little secretion and no fetor, and the granulations are small. In epithelioma the secretion from the ulcerated surface is abundant and fetid, and the granulations large, exuberant, and often in bosses. Rodent ulcer is confined to the upper part of the face, while epithelioma has a preference for certain localities, and may under certain conditions attack any part of the body. The points of resemblance between rodent ulcer and epithelioma are: Both rodent ulcer and epithelioma are new growths composed mainly of epithelial cells; and the new growth is only partly involved in the ulceration. As the growth increases and includes more of the skin and deeper tissues, so the ulceration continues to extend; but the ulceration does not go beyond the new deposit.

On one point I am quite settled, that rodent ulcer if left will in time so change its character as to become true

epithelioma. I can not say whether this change is due to a mere progress of the disease or whether it is that rodent ulcer is peculiarly apt to have superadded to it the characters of epithelioma after the same manner as that of old standing ulcers, unhealed wounds or scars, or other simple sores that become epitheliomatous.—*Lawson, Ophthalmic Hospital Reports.*

PRURITUS VULVÆ RELIEVED BY IODIDE OF POTASSIUM.—At a meeting of the St. Louis Medico-Chirurgical Society, Dr. Bryson related the following case: Having under treatment a patient suffering from fistula in ano and urethral stricture, he learned that the man had syphilis, and gave him constitutional treatment with potassium iodide while he was dilating the stricture. Not long after, he was called to treat the wife of this patient for most intolerable pruritus vulvæ. The general condition of the woman seemed to be very good; but she had been married seven years without bearing any children, and had once aborted in the third or fourth month of pregnancy. These facts, in connection with his knowledge of the husband's history, led the doctor to suspect a syphilitic taint in this woman; and he prescribed potassium iodide in doses of three grains three times a day, which was gradually increased to ten grains three times a day. No local treatment was used, and in three days the distressing pruritus entirely disappeared. The iodide was continued for some weeks longer, with marked improvement of the spirits and health of the patient.

There was no eruption or other lesion characteristic of syphilis apparent about the vulva, and Dr. Bryson considers that the trouble was due to an obscure syphilitic nerve affection.—*St. Louis Courier Medicine.*

MODE OF ABSORPTION OF MERCURY.—After the inunction of the ointment of mercury in rabbits and men Furbrenger failed to discover any trace of mercury in the rete Malpighii of the skin, but globules were visible in the hair-follicles and in the sweat-ducts. If, however, the epidermis was first removed the metal was then found in the corium, but only a few isolated globules could be seen in the deeper layers of the skin and in the subcutaneous tissue. After exposure to mercurial vapor no mercury could be found in the hair-follicles or sweat ducts, although the surface of the skin was covered with a gray

deposit. Twenty-four hours after an injection of a mercurial emulsion into the jugular vein the presence of dissolved mercury in the blood could be demonstrated in five out of eleven experiments, and the liver always contained mercury in a state of solution. Hence, it seems certain that metallic mercury becomes dissolved in the blood. The metallic mercury in the hair-follicles was considerably diminished in quantity in eight days, and those globules which remained were oxidized on the surface, angular, and dirty-black in color. It is probable that the fatty acids of the skin assist in the solution.—*London Lancet*.

BROMIDE OF SODIUM AND EPILEPSY.—Dr. Hammond's experience has proved the following to be one of the best plans of treatment for epilepsy: Dissolve eight ounces of bromide of sodium in a quart of water. Of this take a teaspoonful three times a day. After three months add one teaspoonful more to the night dose, and after another three or four months add a teaspoonful to the afternoon dose also. At the expiration of a year do the same with the morning dose, and continue with this for a year or more thereafter. If no symptoms of the disease have meanwhile appeared, then gradually reduce the doses, and at the expiration of the third year stop. The attacks do not usually return after this course of treatment. Ordinarily, however, patients stop the medicine after a month or two, and in such cases the attacks almost invariably return. It is then almost impossible to bring these patients under the influence of the bromides again. The doses will have to be at least doubled, and this may so derange the system as to make it impossible to take the medicine longer.

THE EFFECTS OF OIL OF TANSY.—Dr. G. Jewett (*Boston Med. and Surg. Journal*) reports eight cases of poisoning with this drug. Case 1: Fifteen drops at 11 A. M., teaspoonful at 2 P. M.; convulsions, shock, general cyanosis; recovery. Case 2: Teaspoonful to promote catamenia; convulsions and death in one hour and a half. Case 3: Unknown quantity to cause abortion; convulsions; death in three hours and a quarter; no abortion. Case 4: Teaspoonful to cause abortion; coma, recovery; no abortion. Case 5: Four drachms; spasms and death. Case 6: To cause abortion; rapid death; no abortion. Case 7:

Decoction of tansy-leaves to produce abortion; paralysis; coma; death in twenty-four hours without abortion. Case 8: Infusion of leaves daily for a week; also for vaginal injection; abortion, metritis, peritonitis; recovery after three months. As druggists are often asked for oil of tansy under various pretenses, we believe the above table will be useful in reminding them of the dangers attending the sale of tansy and its preparations.

THE TREATMENT OF HYDROCELE.—On December 15, 1881, Dr. Weir presented four cases of hydrocele, performing four different operations for their radical cure, viz: in the first case, injecting the tincture of iodine into the sac containing the fluid; in the second, injecting pure carbolic acid; in the third, injecting a ten per cent. solution of carbolic acid; and in the fourth case, performing Volkmann's operation. In the latter case, there was found to be considerable inflammation and thickening in the sac, and it was not expected that the patient would recover so soon as if it were a simple case. One week later, the patient on whom the pure carbolic acid injection was made was again presented at the clinic, and the inflammation and enlargement had almost entirely subsided. The advantage of this method over that by the injection of the tincture of iodine was, that there resulted less serous exudation prior to adhesion of the two opposing surfaces of the tunica vaginalis.

HYDRATED OIL. HYDROLEINE, WATER AND OIL.—With many persons, brought low by disease, it is impossible to digest fats. The pancreas, which is the organ which emulsifies them and permits their absorption into the system, fails in its powers under such circumstances. The consequence is, emaciation becomes extreme. Now hydroleine, which is partially digested oil, will nourish and produce increase in weight in those cases where oils or fats, not so treated, are difficult or impossible to digest from some failure of the pancreas. Consequently, the tendency to emaciation and loss of weight is arrested by the regular use of hydroleine. There is frequently reason to believe that, if the emaciation which is going on from day to day in patients could be stopped, their lives might be saved.

Hydroleine is prepared by Kidder & Laird, of 83 John Street, New York, and is worthy of trial. We have heard very favorable reports of its use.

Miami Valley Medical Society.*

THE Society held its semi-annual meeting at Loveland, Ohio, November 1, 1881, Dr. S. S. Scoville, the President, in the chair. The attendance was good, and all the members took a lively interest in discussing the various topics presented.

Prof. E. B. Stevens read a paper on the subject of "Uterine Cancer;" also, a paper on the same subject, was read by Dr. F. H. Darby, who exhibited a post-mortem specimen with a drawing. Dr. A. Robb read a paper on "Conservative Surgery," reporting the history of a case. By a vote, the last two mentioned papers were requested to be published in our medical journals.

A paper by Dr. G. W. Wires on "Diphtheria," elicited considerable discussion. An excellent paper by Dr. J. O. Marsh was not discussed for want of time.

Dr. T. J. Mullen, of New Richmond, and Dr. S. W. Fenn, of Batavia, were elected to membership.

Dr. R. T. Trimble, of New Vienna, gave a public lecture in the evening in the Presbyterian Church; subject, "The Hand." The topic was well handled, and well received by an appreciative audience.

W. A. CARMICHAEL, Secretary.

At this point, we will mention that a prescription by Dr. F. H. Darby, proposed as a substitute for the usual *Mistura Glycyrrhizæ* Co., published in the *MEDICAL NEWS* several months ago in the proceedings of the *Miami Valley Medical Society*, contained a number of errors. We append here the prescription as amended by Dr. Darby:

R̄.	Antim. et Potass. Tart., . . .	grs. iv
	Aq. Camphoræ,	fl. ʒ ij
	Aq. Fœniculi,	fl. ʒ viii
	Liq. Morph. Sulph.,	fl. ʒ j
	Glycerinæ,	
	Syr. Simp.,	aa fl. ʒ vi
	Mucil. Acaciæ, }	
	Alcohol,	fl. ʒ ij
	ʒpts. Ether. Nitrosi,	fl. ʒ j
	M.	

* The proceedings of this Society were sent us sometime ago and should have appeared in a previous number of the *MEDICAL NEWS*, but, unfortunately, they got mislaid.—ED.

In this mixture, says Dr. Darby, glycerine is substituted for glycyrrhiza, and solution of morphia and camphor water for the camphorated tincture of opium; giving thereby a perfectly clear, limpid mixture, in place of the muddy, nauseating-looking "Brown Mixture" of the pharmacopeia. It has the same opiate and antimonial strength of that old-time remedy, and does not undergo change by long keeping.

We hope that such of our readers who observed the other prescription will note this correction.—ED. NEWS.

BOOK NOTICES.

A SYSTEM OF SURGERY, THEORETICAL AND PRACTICAL. In Treatises by Various Authors. Edited by T. Holmes, M. A., CANTAB., Surgeon and Lecturer on Surgery at St. George's Hospital. First American, from Second English Edition, thoroughly Revised and much Enlarged. By John H. Packard, A. M., M. D., Surgeon to the Episcopal and St. Joseph's Hospital, Philadelphia, assisted by a large Corps of the most eminent American Surgeons. In Three Volumes. With many Illustrations. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: G. T. Craven & Co., 141 and 143 Race Street.

Some time ago, we noticed the first volume of this superb work. We have now the second volume before us. This volume is devoted to the consideration of the "Diseases of Organs of Special Sense;" "Diseases of Circulatory System;" "Diseases of Digestive Tract;" "Diseases of Genito-Urinary Organs."

When noticing the first volume, we described the work in detail, and, consequently, it is not necessary to again describe it. We will, however, repeat that it is not the labor of one man distinguished in his profession, but it is the product of the labor and learning of many eminent individuals. It is, undoubtedly, the greatest work upon surgery ever published, in either the English language or any other language. Each subject has been written by some one who has more or less made it a special study, and, consequently, qualified to treat it exhaustively. Every department, as a result of this plan, exhibits original research and independent thought; and nowhere

is seen the work of the mere compiler, as must be the case, to a considerable extent, in a work where a single writer prepares all the subjects, with not a few of which he must necessarily be but little familiar.

The second volume contains nearly eleven hundred pages (about the same as the first) of royal octavo size, double columns to the page. The paper is of superb quality; and the type, although of brevier size, is so very plain and distinct, that it is read with ease. It will be observed the vast amount of matter contained in a volume—double that of many of greater bulk. The three volumes composing this magnificent work are put at so low a price as to be within the means of every physician.

A TREATISE ON THE DISEASES OF INFANCY AND CHILDHOOD.

By J. Lewis Smith, M. D., Clinical Professor of Diseases of Children in Bellevue Hospital Medical College; Physician to Charity Hospital, etc. Fifth Edition. Thoroughly Revised. With Illustrations. 8vo. Pp. 836. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: R. Clarke & Co.

A work that has passed through five editions must be regarded as one that has received the endorsement of the profession. If it had not met with favor from physicians and students, it would never have gotten beyond a first edition.

When we come to examine the work closely, the cause of the high estimation in which it is held by the profession is evident. It has been the primary object of the author to produce just such a work as the practitioner of medicine needs, viz: a practical work—one that can be consulted in actual cases with advantage. While the author has omitted lengthy discussions, and has avoided quoting opinions of other writers, which might be interesting to some under some circumstances, he has devoted considerable space to the therapeutics of various diseases.

The text in this edition has been considerably enlarged, though, in consequence of a change of type, the bulk of the book is not materially increased. The improvements that have been added bring the work fully abreast of the times. We can assure our readers that they can procure no better work on infancy and childhood, for reference and study, than this one.

The publishers deserve much credit for the beautiful style in which they have gotten the work out. It is printed on smooth, handsome paper, of the very best quality, with clear, plain type. The binding is in half Russia, which is both much handsomer and more durable than leather, and costs but a trifle more. Messrs. Henry C. Lea's Son & Co. are the only publishing house that bind medical works in half Russia.

NERVOUS DISEASES: THEIR DESCRIPTION AND TREATMENT.

A Manual for Students and Practitioners of Medicine.

By Allan McLane Hamilton, M. D., one of the Attending Physicians at the Hospital for Epileptics and Paralytics, Blackwell's Island; Consulting Physician to the Hudson River State Hospital for the Insane, etc. Second Edition, Revised and Enlarged. With 72 Illustrations. 8vo. Pp. 598. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: R. Clarke & Co.

The first edition of this work was published in 1878, and was out of print several months before the present edition was issued. This fact proves that the work has met with great favor from the profession. It should be kept in mind that a work on a special subject, like that of diseases of the nervous system, is not in demand like a text-book upon practice of medicine or surgery, and sells much more slowly. For an edition of such a work to become exhausted in two or three years, is evidence that it possesses unusual merits, which have caused it to be more than usually sought for.

It has been the object of the author in preparing this work, to produce a concise, practical one, and we think it will be generally conceded that he has succeeded. All of the affections of the brain and spinal cord, that are generally met with, are described in sufficient detail, without unnecessary verbiage, to give the student a very clear idea of them. While other writers are referred to, yet but little space is given to their discussions—the author limiting himself to his own accounts of phenomena observed by him in his researches. He has, therefore, made the subjects of diagnosis and treatment of nervous diseases more simple than they will usually be found in works of this kind.

On page 179, he begins the treatment of aphasia, syn-

onyms of which he gives aphemia, asemasia, alalia, laloplegia, paralalie. After defining it as a partial, or complete, loss of speech, which does not depend upon any local or lingual impairment of function, but upon disease of the speech-centers, whereby the origination of forms of expression is suspended or deranged to a greater or less degree, or a kindred loss of writing or gesticulating power; and that it must not be confounded with aphonia, or with the condition met with in idiots or mutes—he proceeds to locate the disease in the third frontal convolution, stating that it is characterized by the disruption of the connection between the formation of ideas and their expression by the lingual apparatus. How it is to be accounted in locating the function of speech in the third frontal convolution, that aphasia has not existed in not a few cases when that portion of the brain has been removed, either by disease or by mechanical means, he does not explain. Again, aphasia has existed, when post-mortem has disclosed the fact that the disease of the brain was far distant from the third frontal convolution, and it exhibited no pathological condition whatever.

Dr. Hamilton states that our first information of aphasia is from Sextus Empiricus, who lived 200 years before Christ. But he, it seems, merely mentioned the fact that a man struck by a stone forgot the letters of the alphabet. The younger Dax first demonstrated that aphasia was connected with right-sided paralysis. But Broca limited the spot to the second or third frontal convolution.

Students and physicians will find this work of Dr. Hamilton a highly interesting one. We think every physician should have it on the shelves of his library. Its attentive study will make him far more competent to treat diseases of the nervous system.

A MANUAL OF ORGANIC MATERIA MEDICA. Being a Guide to Materia Medica of the Vegetable and Animal Kingdoms, for the Use of Students, Druggists, Pharmacists and Physicians. By John M. Maisch, Phar. D., Professor of Materia Medica and Botany in the Philadelphia College of Pharmacy. With many Illustrations on Wood. 12mo. Pp. 459. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: R. Clarke & Co.

[This work will undoubtedly be highly esteemed by

pharmacists and students of pharmacy. Physicians, too, who are interested in *materia medica*, will derive much advantage in consulting it.

The classification differs from similar works prepared for medical students, as with them the study of *materia medica* is combined with that of therapeutics; and, consequently, the classification usually adopted is based upon a similarity in the action of drugs on the animal economy. The author has divided the work into three parts. In the first part are considered "Animal Drugs," under which are classed cantharides, leeches, etc.; eggs, anastomosing fibrous tissue, gelatines, calcareous skeletons and concretions, etc. In the second part are described "Cellular Vegetable Drugs," of which there are twelve divisions. The third part is devoted to the consideration of "Drugs Without Cellular Structure;" under which division are described extracts and inspissated juices, sugars, gums, resins, volatile and fixed oils, waxes, etc.

No one in this country holds a higher position as a teacher of pharmacy than Prof. Maisch; and we have no doubt but that this work will become popular as a textbook of *materia medica* with pharmaceutical students, and a book of reference with pharmacists.

A POCKET-BOOK OF PHYSICAL DIAGNOSIS, FOR THE STUDENT AND PHYSICIAN. By Dr. Edward T. Bruen, one of the Physicians to the Philadelphia Hospital, etc. With Wood Engravings. 16mo. Pp. 256. Philadelphia: Presley Blakiston. Cincinnati: R. Clarke & Co. Price, \$2.00.

This volume, we are informed, has been written for a special purpose, viz: to give the student and physician a condensed and reliable manual on physical diagnosis. The arrangement is original; the illustrations drawn specially for it; and itself a success, in evidence of which are the many commendations it has received from prominent professors and practitioners. We learn that it has been placed upon the list of text-books at the University of Pennsylvania Medical Department.

It contains just precisely what the student of medicine wants to know. In this respect, it is not abridged in the least; but there is omitted everything that is not essential for a complete, practical knowledge of physical diag-

nosis. It is small enough to be carried in the side-pocket, but large enough to impart full information of the subject of which it treats.

EDITORIAL.

TO OUR SUBSCRIBERS.—In sending out the first number of a new volume of the MEDICAL NEWS—the *fourteenth* volume—we will say to our subscribers that we wish them all “A Happy New Year.” Many of our subscribers have been with us from the beginning of the journal, and we feel towards them as if they were old personal friends. The large majority of them we have never met, but they seem to us as if we had always had an intimate acquaintance with them.

We expect that the coming volume will be much superior to any previous volume. Quite a number of eminent gentlemen, who have never before contributed to the pages of the MEDICAL NEWS, have promised to write for it.

It should be kept in mind that the NEWS, each month, contains *seventy-two* pages, or 864 pages for the year. With a trifling cost for binding, at the close of a volume, a subscriber has a large octavo volume, equal in size and amount of reading-matter to a work for which a publisher would charge six or seven dollars, costing but two dollars. In addition to this, the information contained in the journal will be two or three years in advance of the text-books printed the same year. Besides, the medical journal has a large variety of reading-matter in every department of medicine, forming quite a library; while the text-book or monogram is confined, in its range, to a single subject. A physician who has thus the opportunity, for a trifling sum, to add to his library every year a very large medical book, bringing up the various departments of medicine to date, and does not improve the opportunity, certainly cares but little about his profession. Such a one practices medicine only for what little money he can make out of it, and places no value whatever upon knowledge.

We hope our friends will remit their subscription money without delay; and, not only so, but that each one will strive to send us one or more new subscribers.

A little effort on the part of our friends will enable us to double our subscription list. We would not ask any one to assist in increasing the circulation of the *MEDICAL NEWS*, if we only would be benefited. But such would not be the only result, by any means. The profession at large could not but be benefited by the large circulation of such a journal, filled, as each number is, by most valuable reading-matter. And then our pages are open for the dissemination of any items of news, that any subscriber may be in possession of, that would be of general interest. Every one of our patrons can feel that the journal is his own property, so far as bringing any legitimate subject before the profession in a proper manner.

To use a hackneyed expression, "Now is the time to subscribe." Before the issue of the February number, we hope to have inserted in our subscription book the names of very many physicians who have never before taken the *MEDICAL NEWS*. We have noticed that when a medical man has concluded to take it for a year, he continues to be a permanent subscriber, and not unfrequently writes to us that he can not get along without it. We have received hundreds of such letters.

SMALL-POX.—This disease seems to be prevailing pretty generally throughout the country. We hear from it at all points. In Cincinnati an epidemic of a mild character has existed for some weeks—probably not more than one in fifteen or twenty cases dying.

It is now close on to a hundred years since Jenner discovered vaccination, and yet this horrible disease, small-pox, continues to destroy its tens of thousands. Why is this? In vaccination the profession believes a sure prevention of the disease has been found, and yet its ravages have not been staid. There must be inefficiency somewhere. There must be either great neglect in making use of proper vaccination, or it is more or less temporary in its protective power, and consequently needs to be repeated.

Inert matter, no doubt, is frequently employed that is followed by local inflammation and swelling, simulating, to some extent, the phenomena resulting upon a genuine vaccination, but which really is the consequence of inoculation with decaying animal matter. Such an operation, of course, not being a genuine vaccination, can not pro-

fect, and the subject of it will take small-pox whenever exposed. Believing himself, however, to be properly vaccinated, he rests his faith upon it, regarding himself secure, but, in fact, continues ready to be a victim.

A prolific cause of so many persons continuing to be liable to small-pox so soon as the disease has made its appearance at any place, and thus aid in starting up a wide-spread epidemic, notwithstanding the discovery of vaccination, is that with large numbers a single vaccination fails to protect, though in every respect it may be a genuine one. Every physician knows that, notwithstanding it is the rule, an attack of small-pox gives immunity from future attacks, yet persons do take small-pox a second time, and we have heard of death resulting from a third attack. As it is admitted, then, that protection against small-pox does not always follow upon having the disease, although it is the rule, it is certainly reasonable to suppose that exceptions frequently take place of vaccinations failing to protect.

It may be asked, how is it to be known, when a person has been vaccinated, whether the operation, in his case, will protect him from small-pox? We can only know by revaccination; feeling assured that if a second vaccination "takes," he was not protected by the first. And revaccinations, we consider, should be continued, one after the other, until the subject is no longer affected by the operation; and then, and not until then, can it be certain that immunity from small-pox has been attained. We have seen on the arm of an individual as perfectly a characteristic cicatrix of a genuine vaccination as was ever made, and yet the person afterwards, was attacked, not by varioloid, but by severe small-pox, leaving the face terribly scarred. In this case, vaccination had failed completely in securing any protection whatever from small-pox.

It is supposed by some authorities that the protection from small-pox produced by vaccination is permanent—not becoming destroyed or weakened by time. Most physicians, however, seem to believe that time does nullify its influence. A popular notion is, that its protective power lasts for only seven years. How such a notion originated we do not know. That it is incorrect, our own experience proves. We have known the efficacy of vaccination to be in full activity after many multiples of seven years. Our experience has led us to consider it

probable that a successful vaccination previous to puberty will continue efficient until that time, but that, at that period, such changes may take place in the system as to modify its influence, and consequently that it is safer to repeat it after puberty has been established. After the period of puberty, we have no doubt a successful vaccination maintains its protective power the remainder of life.

There can be no doubt but that we have in vaccination a sure protection against small-pox; and the only reason that the dread disease has not been stamped out long ago is simply because ignorance in physicians and ignorance in the laity has prevented the intelligent use of it. If only genuine matter was used, and it intelligently employed, the disease would soon cease to exist.

SANITARY CONVENTION.—There will be held at Ann Arbor, Mich., February 28 and March 1, by invitation of the citizens, a SANITARY CONVENTION under the auspices of the State Board of Health. The sessions on the first day will be at 3 P. M. and 7:30 P. M. On the second day at 9:30 A. M., 2:30 P. M., and 7:30 P. M. During each session of the Convention there will be one or more addresses or papers on some subject of general interest pertaining to public health, each paper to be followed by a discussion of the subject treated.

A committee have chosen the following officers: President, Judge T. M. Cooley; Vice-Presidents, W. F. Breaky, M. D., Judge W. D. Harriman, Hon. Israel Hall, C. W. Warden, Esq., H. J. Brown, Esq., Richard Hudson, Esq.; Secretary, V. C. Vaughan, M. D.

Manufacturers of and dealers in all kinds of sanitary apparatus or appliances are invited to send specimens of their articles for exhibition at this Convention. A full description of each article must be forwarded to the Secretary of the Convention, with application for space. Judges will be appointed to examine the various articles on exhibition, and certificates of merit will be awarded to such articles as are deemed worthy.

There will be an address of welcome by the Mayor. Also an address by the President of the Convention, Judge Cooley.

Among the subjects to be presented and discussed are the following: (1) Ventilation; (2) Causes of Insanity;

(3) Injuries to Health from Overflowed Lands and from Milldams and other Obstructions in Rivers; (4) Water Supply and Disposal of Waste Matter; (5) School Life and Hygiene.

VIVISECTION.—This is a subject that is exciting a great deal of attention in England. Quite a number of would-be humanitarians, or of individuals who are desirous of obtaining notoriety as such, have been making themselves conspicuous by interfering with the researches of scientific men. Among the meddlers we have heard of a woman. Whether or not she is married and has children we do not know; but, if she is a mother, we feel sure that, if the facts were investigated, it would be disclosed, while she is looking after the welfare of weasels, Tomcats, skunks, and monkeys, her children are grossly neglected—having soiled faces and hands, fighting one another, falling down stairs, crying at times for something to eat, etc.

We learn from a London letter that the first attempt to embarrass physiologists and pathologists in their researches by vivisection was made in 1874 by the Society for the Prevention of Cruelty to Animals. The letter does not state, but we believe that at that time a distinguished French pathologist, whose name we can not call to mind, was prepared to deliver a lecture before a body of very eminent English physicians who had already assembled to hear him. Just as he was ready to proceed with his lecture, officers of the law, at the instigation of the "Society for the Prevention of Cruelty to Animals," made their appearance and interrupted the meeting. A prosecution was instituted, but was not successful. The lecture, however, which was to have been illustrated by vivisections, was put a stop to, which was a source of satisfaction, to some extent, to the Prevention of Cruelty to Animals Society. It was stated that the distinguished French scientist returned to Paris filled with disgust of Englishmen, English laws, and English customs generally, while the eminent English physiologists and pathologists separated exceedingly mortified in consequence of the treatment received by the learned foreigner whom they had invited over to lecture to them, and who was their guest.

In 1876, Parliament enacted a law, the provisions of which are—"That no experiment calculated to give pain,

or inflict a serious injury, may be performed on any living vertebrate animal, except by a person holding a license from the Home Secretary, and in a licensed place. An anesthetic must be employed during the whole duration of the experiment, and the animal must be killed before the effects of the anesthetic have passed off. Should it be essential to the experiment in question that anesthetics be not used, or that the animal be allowed to recover from their effects, then a separate and special certificate for this purpose must be obtained. The dog, cat, horse, ass and mule are specially exempted from vivisectional experiments, unless it is shown that the object of any experiment will be frustrated unless performed on them. The applications for licenses and certificates have to be signed by a president of one of the medical corporations and a professor in medicine, physiology, etc., in some British university."

The restrictions and annoyances which have followed upon this law have proved so great that nearly all scientific research through vivisection has been stopped throughout England. Such men as Lister, Ringer, Ferrier and Fraser have in this way been prevented from continuing their important investigations in their country.

We copy the following example illustrating the ridiculous workings of the law by which foreign *savants*, guests, as it were, of the nation, are prosecuted and treated with indignity:

"Such men as Lister, Ringer, Ferrier and Fraser have in this way been prevented from continuing their important investigations in this country.

"The intensity of the opposition to this form of scientific research has been well illustrated this week. During the meetings of the Congress the function of the cerebral cortex was discussed in the physiological section, and Prof. Goltz described some experiments on dogs, from which he deduced that the cortex acted as a whole. Dr. Ferrier joined in the discussion and detailed another series of experiments performed on monkeys, which showed that different parts of the cortex cerebri had different junctions. Subsequently about one hundred physiologists met at King's College Laboratory, and inspected a dog of Goltz's and two monkeys, on whom Dr. Yeo had operated many months before, one of which was deaf and the other partly paralyzed on one side. Dr. Ferrier

spoke and pointed out how the condition of these monkeys supported his views. A summons was taken out against him for this, and counsel attempted to prove that because Dr. Ferrier had examined these monkeys and compared them together, he had conducted an experiment with them which he was not entitled to do without a license, and that he had been a party to keeping the animal alive after the anesthesia had passed off. The magistrate quickly dismissed the summons."

There is no doubt but that vivisections have been carried to excess in some countries, as in France, and need- less cruelties been perpetrated upon animals; but when properly performed, under proper circumstances, much is done by them in advancing science. Very much of the phenomena of the nervous system, now understood, we would be entirely ignorant of unless we had been enlightened by vivisection. But cruelty is not necessarily attached to vivisections, if, by it, the infliction of pain is meant. By means of anesthetics no pain whatever need be inflicted; and we can scarcely imagine an instance in which it would be necessary for the completeness of the experiment to do without an anesthetic. On the contrary, by its use, generally, the vivisection is rendered more perfect and satisfactory. The shock which would follow upon an operation, when an animal is conscious, and which would interfere very much with the regular phenomena, is largely avoided, and what is also very important, the struggles of the animal are gotten rid of.

It is to be hoped that the profession of the different States of this country will jealously watch any propositions to pass any laws that may interfere with this important means of advancing science. It is much easier to prevent the enactment of improper laws than it is to repeal or modify them after they have been enacted. Had the profession in England been on the alert when a number of the silly and ignorant members of the Society for the Prevention of Cruelty to Animals were proposing their absurd enactments, they could probably have brought about such modifications as that a law having only proper restraints upon excesses and cruelty in vivisections would have been passed.

COMPLIMENTARY.—Although we have received hundreds of letters in which the MEDICAL NEWS has been mentioned

in the most complimentary terms, yet, considering it rather in bad taste to quote the laudatory remarks of our friends in their private letters, we have always avoided publishing anything thus said about us. In other medical journals, however, it is a very common sight to see letters printed that have been received containing praises of them:

Since our last issue, completing the volume of 1881, we have received so many letters containing commendations of the *MEDICAL NEWS*, we have thought we would, for once, make a departure from our usual course, and publish a few lines in praise of our journal, taken from one of the letters selected at random from very many others containing similar remarks. We quote as follows:

FREEPORT, Mich., Jan. 12, 1882.

J. A. THACKER, M. D.:

Dear Sir :—* * * * *

I have been, and am still, taking a number of medical journals—some of which the subscription price is five dollars a year—but I find none of them as practical as the Cincinnati *MEDICAL NEWS*. I would not be willing to exchange it for any other medical journal I am acquainted with.

I am, very truly, yours,

J. A. DE VORE.

SPARE MINUTE SERIES. *The Might of Right*. From the Writings of Wm. Ewart Gladstone. Selected by E. E. Brown. With an Introduction by John D. Long. 12mo. Pp. 300. Boston: D. Lothrop & Co.

There is probably no greater mind in the world at this time than that of Mr. Gladstone. An orator, scholar, financier, statesman, premier, and, we may also add, theologian, he is conspicuous among the most eminent men of the world. To his present exalted position as premier of England, he has raised himself by his great powers of mind, overpowering all opposition, and compelling recognition from the Queen, who belittled herself and brought contempt upon herself by efforts at treating him with contempt. Gifted by nature with more than ordinary intellectual strength, he has acquired a culture of mind by study, research, reading, observation, and reflection, that makes him pre-eminently superior. With classic lore and the learning of modern times he is perfectly familiar.

In every department of knowledge he exhibits a skill which the ordinary mind can only acquire by years of study in one. How great, how stupendous is such a mind! How mighty and far-reaching is its grasp—how extensive is the culture and learning possessed by it!

The little work whose title we have here given is made up from what we might properly term the droppings from the overflowing of such a mind as that of Mr. Gladstone—jewels that fell from the casket as the owner mixed with other men. There are found in it expressions in regard to beauty, education, Christianity, the holy Scriptures, truth, poetry, literature, religion, and quite a number of other subjects.

Under the heading of the "Holy Scriptures" we find the following expression: "Few, indeed, are there among us whose religious belief and system has actually been formed either from Scripture as a whole, or even from that limited, but singularly precious, portion of it contained in the New Testament. What we suppose to be from Scripture is really, as a general rule, from the catechism, or the schoolmaster, or the preacher, or the school of thought, in immediate contact with which we have been brought up; or, perhaps, it has come from the pastor, or from the parent, and in some cases by the living and affectionate contact of mind with mind."

LISTERINE.—Some object to the name of this preparation, derived from the name of the famous surgeon, Lister. But what does a name signify, if the article itself is all right? And we believe that, in this case, it is all right.

Listerine is, as it is claimed to be, a powerful, safe and pleasant antiseptic. It will do all that carbolic acid, and other antiseptics, will do, while it has none of the objectionable features belonging to them. It does not soil the clothes, and has no offensive odor. As an application to ulcers and suppurating wounds; as a gargle or mouth-wash in scarlatina, scarlet fever, and other affections of the mouth and throat; as an injection in leucorrhea, gonorrhoea, etc., it will be found invaluable. We have used it in one and two teaspoonful doses in disordered stomach, attended with acid eructations, with most gratifying results. When the eructations were of a fetid char-

acter, we have no doubt the benefit would be still more marked. Many cases of gonorrhea will yield to it, as an injection, without any other treatment.

We have not yet had an opportunity to observe its action, by the microscope, on bacteria; but we intend to soon, and will report. However, its action as an antiseptic shows pretty conclusively what would be the effect. The advertisement of it will be found in our advertising pages.

A FATAL DISEASE CONTRACTED FROM A HORSE.—A curious suit for damages has been brought against the Hestonville, Mantua and Fairmount Passenger Railway Company, by Widow Mary Loughrey. Michael Loughrey, who was Mrs. Loughrey's husband, was employed as a driver by the company, early in 1880. The horses attached to his car, it is alleged, were afflicted with glanders. Michael contracted the disease. Dr. D. Hayes Agnew, and other eminent physicians, were called in, but they could not control the malady. Loughrey suffered intensely for about six weeks, when he died. Mrs. Loughrey claims that the company was legally obliged to employ horses of sound health. She claims \$20,000 damages for her husband's life, sacrificed, as she charges, through the company's neglect.

SUITS FOR MALPRACTICE.—Prof. R. A. Vance, of Cincinnati, delivered an interesting lecture on "Knee-Joint Injuries and Inflammation," before the N. W. O. Med. Association, and their *medico-legal* aspects, during which he made the startling statement that he was cognizant of nearly fifty suits for malpractice, now pending, within a radius of about 100 miles of Cincinnati; nearly all of them being brought by impecunious parties against men of average ability, who had accumulated sufficient means to tempt the cupidity of the plaintiffs and their accomplices. A malpractice suit, under our present laws, is a better venture than a lottery to most of these parties; as there can be no loss, but may be great gain.

SMALL-POX DECREASING IN NEW YORK.—At the present writing, small-pox seems to be on the decrease in New

York. For the week ending December 3, thirty-three cases were reported, while there were but seventeen for the week ending December 10. This result is due to the very thorough manner in which each new case is followed up by the Board of Health. Whenever a case is reported, the patient is immediately removed to the Riverside Hospital on Blackwell's Island, and each occupant in the house in which the case occurred is vaccinated. A physician then visits the house every day for two weeks thereafter, and thus any new outbreak is easily controlled.

DR. WILLIAM E. BUTLER, a staff officer of General Jackson in the war of 1812, died at Jackson, Tenn., a few days ago, aged ninety-two years. Once he was defeated by Davy Crockett for the Tennessee Legislature. He owed his defeat to the fact that he had a carpet on his floor. Crockett proclaimed from the stump: "Why, my fellow-citizens, my aristocratic and wealthy competitor walks every day on store goods finer than any of your wives or daughters ever wore."

DEATH UNDER CHLOROFORM AND ETHER.—Last week a patient died at the Great Northern Hospital whilst under the influence of a mixture of chloroform and ether administered preparatory to the removal of the nail of the great toe. The anæsthetic was given on lint, and the operation was completed, when it was discovered that the pulse had ceased, and the patient succumbed in spite of every effort adopted to restore animation.—*Lancet*.

VIRCHOW recently celebrated the twenty-fifth anniversary of his appointment to a professorship in the University of Berlin. He has also been re-elected to the German Parliament.

THE Chicago medical authorities state that persons come to the health office every day affected with small-pox and apply for admission to the pest-house.

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ORIGINAL CONTRIBUTIONS.

Insanity in its Relations to the Medical Profession and Lunatic Hospitals.

BY NATHAN ALLEN, M. D.

Read at the Annual Meeting of the American Association for the Protection of the Insane, in New York, January 20, 1882.

A triangle has three important points of observation. It is so with reference to Insanity, the Medical Profession and Lunatic Hospitals.

Each sustains a most intimate relation to the other, and neither can be thoroughly discussed in all its bearings without considering the whole. The present time affords a favorable opportunity to institute certain inquiries and comparisons upon these subjects, as it respects their mutual relations. What, then, are the facts?

INSANITY AS A STUDY NEGLECTED.

1. The study of insanity has been greatly neglected. There are various causes for this neglect. It has been found more difficult to ascertain the true functions of the brain than any other organ in the human system. The functions of nearly all the organs of the body have been very correctly understood for many years, but attention has not been directed to those of the brain so fully, and neither can it be said that they are all yet correctly or generally understood. Medicine is a progressive science, and is based upon the results of discovery, experiment and observation. While physiology teaches what are the normal or healthy functions of all parts of the body, we learn by pathology what are the changes which disease

makes in these functions. But before we can learn what are the condition and character of the various organs of the human body in a diseased state, we must first understand distinctly the functions of these organs in a healthy state. Though the brain has been made a special subject of study for many years as to its uses and diseases, our knowledge of it is far behind that of any other organ. Insanity or mental derangement is based upon the abnormal condition of the brain, or in other words, the manifestation of mind through the brain in a morbid or diseased state. But inasmuch as the development of the brain both in a normal and abnormal state is greatly affected by other parts of the body, it becomes necessary in order to understand them, that we should have a very correct knowledge of the laws of health and disease as applied to the whole body.

The study of insanity is therefore attended with greater difficulties than that of any other department of medicine. In the order of medical studies this would naturally come last, but in too many instances, it has been entirely neglected. As formerly very little was known respecting mental disorders, they were not included in the curriculum of medical studies. In the two great mediums or channels for advancing medical education in this country, mental derangement or insanity unfortunately has not held the position that it ought to have had. These two great educating agencies are, 1st: The medical schools or institutions for giving courses of lectures, and 2d, The American Medical Association, composed of leading physicians throughout the country. For many years we have carefully examined the annual circulars of medical schools advertising their lectures, and in very few instances is insanity named as one of them.

MEDICAL SCHOOLS.

In only three or four schools in the country is there a professorship, or course of lectures devoted exclusively to mental disorders. In a few institutions we learn that here and there a lecture on insanity is introduced under the head of theory and practice of medicine; but the subject is so closely connected with medical jurisprudence that it is more often discussed in courses of lecture on this subject.

As a matter of fact, however, so little attention is given

to mental derangement that scarcely ever a book on this subject is included among the standard works of study and reference proposed for students. Of course, in examination of students for graduation, few, or no questions are ever asked on the subject.

In reviewing, therefore, the history of teaching and lecturing in our medical schools for twenty or thirty years, we find very little attention given to insanity. While improvements have constantly been made in nearly all branches of study, and the standard of medical education has been generally raised, this has been neglected. Considering the importance of insanity compared with other diseases, and at the same time that the disease has been steadily increasing, it is very unfortunate that its study should have been so generally neglected.

Lectures and instruction may be given upon nervous diseases generally, but scarce any upon those confined exclusively to this form of disease. As a branch of medical study, it is safe to say that the nature and treatment of mental derangement has been almost entirely neglected in all the schools throughout the country. Let us look at the next most important agency for promoting medical studies.

THE AMERICAN MEDICAL ASSOCIATION.

This Association was organized in Philadelphia in 1847, a little over thirty years ago. The object of this Association was to promote the interests of every department of medicine, and the medical schools have always been represented in it. This Association divided its work into different branches or sections so as to have committees appointed with reports, papers and discussions upon each section at its annual meetings. In this way all the departments of medicine are more systematically and thoroughly investigated.

Soon after the organization of this Association a section on psychological medicine was formed, making insanity, of course, a prominent part, and it was expected that all interested in mental diseases would come into this section. This, of course, would bring in those physicians connected with lunatic hospitals, and the whole subject of insanity and the treatment of the insane would be made prominent.

It so happened, however, that the superintendents of these hospitals had just before formed a small organization of their own, and did not incline to join or work with

the American Medical Association. This section in the Association did not, therefore, start with the interest and ready workers as other sections did, and no reports nor papers were at first found prepared on the subject.

After waiting some ten years, the American Medical Association passed a resolution, especially inviting superintendents of these hospitals to join it, and send a delegate to their meeting to urge this union. Between 1860 and 1870, delegates were sent several times to the annual meetings of the superintendents, urging them in behalf of the medical profession, in behalf of the interests of the insane, and for their own improvement as well as that of the hospitals, that they would unite and take part in the work of the Association.

While some superintendents advocated a union, a majority opposed it. After several attempts had thus been made and failed, the Medical Association sent no more delegates to the meetings of the superintendents, so that since 1870 no fraternal intercourse of this kind has been carried on between these two bodies. It is true a few superintendents have occasionally attended, and taken part in the meetings of the American Medical Association, but there has been no distinct section or committee appointed to investigate, and report upon insanity from year to year. In examining the last ten volumes of the transactions of the Association we find only three or four papers on this subject, while many hundreds are devoted to all other topics connected with medical improvement.

This Association has now issued thirty large volumes, containing an immense amount of medical knowledge on every department of medicine, but very little, comparatively, can be found on mental diseases and their treatment. Thus it will be seen that as far as those two great agencies for advancing medical science are concerned, they have done but little to make known the true functions of the brain, or to cultivate and diffuse a knowledge of its diseases. It is true, within a few years, there have been occasional lectures and papers on the subject, and also a few books have been published, or rather republished from English editions, on insanity. Here and there may be found a physician in general practice, or a professor in some medical school, who has taken special interest in the diseases of the brain and their treatment, but the number of such men in the profession is compara-

tively small. When it is considered how every branch of medicine has advanced within twenty or thirty years, and how important are the disorders of the brain compared with other diseases, it is surprising that the former should have been so generally neglected.

SUPERINTENDENTS OF LUNATIC HOSPITALS.

But there is one body or agency which has taken special interest in this subject, that is,—The American Association of Superintendents of Lunatic Hospitals. This Association was organized thirty-five years ago and, though composed of a very limited number, it has held annual meetings, to which valuable papers have been contributed, followed occasionally by important discussions.

By means of this Association, mainly, a quarterly journal devoted exclusively to the interests of this specialty, has been published for many years. This journal contains a great amount of valuable matter on insanity—in fact, it comprises nearly all that has been published in this country.

But this journal has had a very limited circulation, and its perusal has been confined almost wholly to specialists on this subject. It has done but little to enlighten the members of the medical profession upon insanity, or to diffuse information generally in the community. The chief object of this journal has been seemingly to build up experts in this department and place wholly in their hands the treatment of the insane and the management of lunatic hospitals.

Thus, while the study of insanity has been neglected by the profession at large, and the experts have assumed to take entire charge of it, the establishment and management of hospitals has fallen almost wholly into their hands. Not only this great charge, but nearly all the laws which have been enacted upon the subject by the different States, have been prepared and passed by their suggestion and advice.

Such has been the confidence imposed in them that legislative bodies in all the States have been led from time to time to build hospitals just according to their plan, and to make the most liberal appropriations for the support of the insane. It may be truly said that whatever provisions have been made for the care and treatment of this unfortunate class throughout the country, these have

been directed and controlled almost entirely by those who were or had been or wished to be superintendents of hospitals.

Now the credit of whatever success has attended this course in the management and treatment of the insane, should be given to these experts or superintendents. In some States and localities, the success has been greater than in others. It is so with some institutions; while a few have been wisely managed, and can point to most beneficial results, the conduct of others has been attended with more or less friction and complaint, and sometimes followed by results that were not altogether satisfactory. While it is admitted that a vast amount of good has been accomplished, it is not all good, but has been mixed with many evils. Within a few years the attention of the public has been called to some of these evils.

DEFECTS OF HOSPITAL MANAGEMENT.

The present management of hospitals and the treatment of the insane have been severely and justly criticised. By some critics the system itself is condemned, and by others the superintendents are severely censured. Now, what are these defects? Who is to blame? What can be done to remedy these evils?

The *first* great mistake made was the separation of the experts from the medical profession, and that the study of insanity and the care of the insane should be placed so exclusively in their hands. Many evils have grown out of this state of things. If the members of the medical profession had taken hold of the study of insanity thirty years ago, as they did other diseases, and followed it up by discoveries and improvements to the present day, this branch of study would present a very different aspect from what we now have. Mental disorders would be far better understood by the profession generally. The first symptoms of insanity would be oftener detected, and the disease would be cured in its incipient stages. Thus great numbers would be prevented from becoming violently insane or subjects for hospitals. Then far greater knowledge and skill would be exercised in all this class of cases. Many more would be treated at their homes better than to be sent away. Far greater care and discrimination would be employed in filling certificates for hospital treatment.

The *second* mistake was in erecting so large and expensive buildings. The objections to such a course are very numerous and serious.

The magnitude of the thing has led to extravagance. Instead of thousands thus expended, it has been millions in some instances for the mere building, requiring an investment of three or four thousand dollars for the accommodation of every individual patient. In many cases the provision for officers has been altogether too large, and more expensive than need be.

It has been found that such large establishments were very difficult for efficient administration. Greater liberties are taken, abuses more frequently occur, and patients are the sufferers.

Suitable persons can not be found to take charge of them, without having too many officers. In the multiplicity of numbers, there is far greater liability of friction and complaint; there can not be found that individual responsibility and fidelity in watchfulness and discipline that are so necessary.

The *third*, and perhaps the most serious mistake made, is the *system itself* is wrong, the aggregating of such large masses of diseased persons. The primary object of a hospital is *cure*. In the course pursued with reference to the insane, this matter of cure has been too often lost sight of. In the great crowd, and in the constant changes, individuality or personality is lost. It is impossible to examine, watch and follow up the treatment of every single patient as it should be.

Such is found to be the experience in large hospitals for other diseases, that the per cent. of cures was not so many, and the rate of mortality was greater, where were congregated together the largest number of sick people. As cure is and always should be the chief object of the hospital, and since it is found by actual experience that this is not secured now in a majority of insane patients, it will be seen how rapidly these hospitals become filled with chronic and incurable cases. What can be more sad after long medical treatment than such a result!

The *fourth* objection to the system is, that it violates sanitary laws. It has been truly said that disease is the commencement of decay and of death. While some diseases have more destructive agency upon human organization than others, and also propagate germs of disease

more readily, all sick people must exercise an unwholesome influence upon their surroundings. For instance, it is impossible to secure very good ventilation in a room or ward filled with sick persons. The violation of other sanitary laws might easily be pointed out. But insanity is different from all other diseases. It involves the laws of mind—a derangement of its faculties which are powerfully affected by external influences.

What can be worse for disordered minds than to come all the time in contact with other disordered minds! In the very nature of things, would not the inevitable tendency be for each to make the other worse, or at least to perpetuate the same disorder? In the case of having rooms or wards crowded with deranged persons, how can it be otherwise than to increase that derangement!

Says Sir James Coxe, "What advantage is to be hoped for by associating a curable patient with so large a proportion of incurables? Neither is any gain to be looked for in the mere association of the insane with the insane. Lord Shaftesbury thinks this association has proved most prejudicial to the interests of the insane and he expresses his convictions that herein is one great cause of the immense increase of lunacy."

Now let deranged persons mingle more freely with those who are sane—let them look at their countenances—see their movements and hear their talk, will it not tend to bring them out of their delusions, and restore to them healthy mental action? Are not such results more likely to follow according to reason and common sense? One of the arguments used in favor of congregating the chronic insane was that it would have a *curative influence*.

This theory was advocated in elaborated essays, by some of the most distinguished experts on the treatment of the insane. In fact, superintendents generally advocated this doctrine for many years. But it was a mere theory, and had no support in positive facts or sound argument. It should be stated that this theory never started with the laity, nor by the regular practitioner of medicine, but by those who had for years the charge of lunatic hospitals.

This doctrine is now condemned by the highest authorities in Great Britain, and is no longer, we believe, advocated by the experts in this country.

The *fifth* objection to the present system of congregating together such large numbers of the insane, is that the highest order of sanitary agencies can not be employed for their health and improvement. It might be shown that the laws of ventilation can not be so well applied in large institutions; neither can there be preserved the same amount of neatness or cleanliness or quiet; nor can the drainage and sewerage be so thoroughly and perfectly carried out as in small establishments.

But the most important³ sanitary agency of all, *employment*—wholesome exercise of body and mind—can not possibly be so well applied in large institutions. No therapeutic agency whatever can do so much for the chronic insane as normal, healthy exercise of the body and the mind. A large share of this exercise in the case of men should be taken in the open air. These objects should then be primarily sought in making provisions for this class of the insane. This course of treatment harmonizes not only with physical and mental laws but is found to be productive of the most effectual remedies for the disease. Many illustrations could be adduced where patients who have been confined for years in large hospitals without improvement, on being removed to smaller quarters—given more freedom, and work—have greatly improved physically and mentally, and some have even recovered.

The *sixth* objection to the present system of managing the insane is, that it tends directly to confine a knowledge and treatment of the disease to a few *individuals*. Such has been its effect for the last twenty or thirty years. Instead of diffusing a knowledge of this disease throughout the medical profession, or even in the community at large, the drift has been to confine and magnify this specialty in the hands of a few persons. What are the facts? If the superintendents and other experts had thirty years ago joined the American Medical Association and taken the lead here in a thorough investigation and discussion of insanity as a department of medical study and practice, the members of that Association would have become far more personally interested in it. Such a course during all these years would have diffused a vast amount of knowledge and helped most effectually to educate the medical profession on this subject.

Another important advantage would have been gained by this course. Such an influence would have been

brought to bear upon medical schools that courses of lectures would have been given in most of them every year on mental derangement. In that case the importance of of the subject would have been made more prominent, especially in connection with nervous and other diseases. The attention of students would have been directed far more extensively to this class of studies, so that, in entering upon medical practice, they would have been better prepared to treat cases of insanity.

Had the members of the profession generally been as well educated on this as on all other diseases they would have cured many patients in the early stages of the disease, so that it would have been unnecessary to send them to a lunatic hospital. Besides, they would be better judges as to what cases should be sent away, and then they could have been qualified to fill out certificates giving the evidences of insanity which would be just to the patient and an honor to the profession.

Many persons are now sent to hospitals, who should never have gone. This arises partly from the ignorance of physicians, and partly from the convenience of the public or from the selfish interests of friends. As the laws stand in most of the States it is very easy to commit a person to a lunatic hospital.

Let a husband and wife get at variance, and either one form the determination to get the other out of the way—let repeated provocations be made developing certain ugly peculiarities of disposition and character, and engage some physician to watch the case, and when the time comes, he can readily summon another, posting him respecting the patient. A certificate is then easily filled out and signed, thereby committing the patient to a hospital. Let an individual be addicted to the opium habit, or to habitual intemperance, or to an ungovernable temper, or some pernicious habits, and the friends wish to remove such a one from temptation, by a little strategy or sharp management such persons are committed to a lunatic hospital, and when once there, they find it difficult to get out.

After many years' experience in Great Britain the law of committal has become so perfected in preparing certificates as to require the physician to write down the distinct evidences of insanity from his own personal knowledge, and state what additional facts or knowledge he can

obtain from others in proof of the insanity. If there is a gross mistake or something wrong in the process, the law provides that the signer of such certificate may be sued and compelled to pay heavy damages. Moreover, large numbers of these certificates, with all the precaution given, are sent back by the Commissioners of Lunacy for correction.

One of the greatest evils at present connected with these hospitals is the fact that multitudes are sent to them who need not and never ought to go. From some thirty years' experience in frequent visits to these institutions, and from a long experience of medical practice in a large city, we are convinced of the truth of this statement. There has existed somehow a very strong proclivity on the part of the community and the medical profession (and this has been encouraged by the managers of hospitals) to push without sufficient care and discrimination all mentally abnormal cases into hospitals. Careful consideration is not always taken to see if the parties can not be cured at home. And then what may be the effect of so great a change? It is well understood that many patients are made worse by these changes and some never recover from the shock and first impressions made upon them in entering a lunatic hospital.

PREVENTION OF INSANITY.

Another serious evil arises from the present system or state of things, that is, no plans are devised nor means employed to *prevent insanity*. Within twenty or thirty years, earnest and successful efforts have been made to prevent the spread and even the existence of certain diseases. It is found by ascertaining more definitely the *causes* of disease, and by resorting to sanitary laws, a large amount of sickness may be prevented and considerable mortality averted. This reform has been mainly carried on by members of the medical profession, though some of the laity have joined heartily in the work. But in the prevention of insanity scarce any attempts or efforts have as yet been put forth for this purpose.

The fact is, the nature and causes of this disease are less understood than those of any other. As a department of medicine its study has, we may say, been grossly neglected. While great advances have been made in a knowledge of other diseases, corresponding improve-

ments have not taken place in this, but insanity has been allowed to increase faster even than population. The familiar proverbs "stitch in time" and "an ounce of prevention" do not seem to have been scarcely thought of, as applied to this disease. Says a distinguished writer, "The fact is, that we have allowed a terrible evil—insanity—to grow up among us, and that we have been content to lop the branches, leaving the growth as luxuriant as ever, instead of directing our efforts to destroy it at the roots."

LUNACY REFORMS.

The inquiry naturally arises why there has not been in our country more improvement in this specialty? This question has been answered partly in the facts already stated. But the fault rests more particularly upon the guardians of this specialty. With two or three exceptions, no special provision has been made in these hospitals for such study and improvement. Superintendents of hospitals have had their hands full in attending to business affairs and in the general treatment of the insane. No provision is made for clinical or pathological instruction by lectures or teachers. The advantages of other hospitals are made available for this purpose. It is principally in this way that a thorough knowledge of the disease, and better treatment of the insane, can be obtained. The course now pursued is a routine practice, learned by limited experience and observation. Hospital physicians are too well satisfied to follow the same practice which their predecessors have pursued. As these situations are secured generally by favoritism and promotion, their occupants have but little occasion to be disturbed.

There is another evil, and a serious one, too, connected with the system, which is somewhat difficult to describe. As this specialty has been conducted for thirty years or more and, as lunatic hospitals are now managed, the tendency is to foster an *undue spirit of pride and conceit* in those employed in them. The parties themselves may not be conscious of such effects, and are not so much to blame. The force of circumstances have made them such, and has also tended to place men of this particular stamp in these situations. Let us look at the facts; All specialty of studies or of business develops a particular class of faculties and is productive of special knowledge. The

longer such a course is pursued and the more exclusively it is connected with self-interests, the effects become intensified. If all persons outside of the individuals thus engaged are supposed to have little or no knowledge on this specialty, and, more particularly, if it includes a profession or class with which these individuals are associated, what is the natural and necessary effect upon mental development? Let such persons be placed in positions of power and influence, and what is the effect upon character? Does it not tend directly to cultivate a feeling of self-importance and conceit in one's own opinion? It is well understood by young men engaged in medical studies that a berth or appointment in a lunatic hospital is very desirable, and that the only way to secure these situations is attention to special studies, and these must be pursued connected with such institutions. It is understood also that appointments in these hospitals give a medical man a sure support and in due time a prominent position before the public. How different are the chances of support or of distinction in the general practice of medicine! Then consider the great amount of labor, exposure, and uncertainty staring one in the face—the very things necessary to develop a well-balanced character! It is not difficult to point out the particular type or class of minds which incline to the former course. From this and other causes it is thought that many of these situations have fallen into the hands of persons not progressive in character nor possessing the highest order of talent.

Suppose a very different state of things existed—that the whole medical profession were thoroughly educated upon the subject, and that all students were giving as much attention to this specialty as to any other. Now let the place of a superintendent be filled by selecting from the profession a man of 15 or 20 years of general practice, a man of established reputation, well known for his sound judgment, good common sense, broad views on all subjects, and especially one interested from choice in diseases of the nervous system and the brain; and let the place of assistants in the hospital be filled from the ranks of young physicians by competitive examinations as in other hospitals. These institutions would then be managed by a class of men with whom the most fraternal relations would exist on the part of the profession—men who would respect the opinions of others on this specialty

wherever found—men who would gladly seek counsel and advice from consulting boards of physicians or at the hands of commissioners of lunacy. Improvements, reforms and supervision would be sought and not opposed. There would be other important advantages secured by such a course. If an experienced physician is placed at the head of lunatic hospitals, he would have the advantage of being acquainted with all common diseases. Now insanity in its causes, relations and treatment is most intimately connected with other diseases especially in its origin and primary stages. A thorough knowledge of these diseases can be obtained only by careful study and observation in the regular practice of medicine for years. There can be no question but that a physician with such an experience will treat the insane more successfully than one always confined within the walls of a lunatic hospital, and who has but little knowledge or experience in respect to diseases outside. In the opinion of some persons, this is one of the secrets why the treatment in hospitals is not more successful, or the per cent. of cures is so small.

Again, there are two elements or features in character which are far more likely to be developed in the general practice of medicine than in a small circle or in a hospital—that is humanity and a knowledge of human nature.

It is unnecessary to show how important these two features of character are in such institutions, nor to dwell upon the fact that occasions frequently occur when it is very evident that these qualities in such positions are not so manifest as they should be.

It is not difficult to prove that these two elements of character are far more likely to be secured by mingling with all classes and conditions of people than it is possible by associating constantly with those whose minds are deranged, and whose bodies are diseased. It is thought by some that the cause or reason why we hear of so many abuses and complaints against attendants in hospitals, is that they have become hardened on account of the strange scenes, terrible tempers, and bad dispositions which they frequently witness and encounter among the insane. It is said that superintendents of lunatic hospitals are more likely to become insane than most other persons. This arises undoubtedly from a constant influence of abnormal characters and unpleasant surroundings upon the mind, and that these appeals are made almost entirely to one

class of faculties. The power and force of circumstances in the development of habits and character are not always sufficiently considered. Again, another general defect in the present system is that it is often arrayed against improvements or reforms. There has been too much willingness on the part of its friends to jog along in the same rut, or beaten track, and to oppose or turn a deaf ear to outside suggestions of changes or improvements. The history of all reforms shows that they scarcely ever started within the circle or institution in which the evils existed. The history of lunacy reform is not an exception. Here and there an individual has broken away from the ring or from his connection with an institution, and devoted all his energies and talents to eradicate sundry evils and effect certain reforms, but the managers of hospitals generally have been arrayed against any such changes.

This opposition has been very marked in the United States and can be easily accounted for from the facts stated in this paper—how insanity as a disease has fallen into the hands of a few interested parties, and these have had the entire charge of hospitals. In closing this paper a few suggestions or inferences will naturally occur.

SUGGESTIONS.

In the first place, hospitals for the insane should be smaller than they are usually now built, and confined exclusively to the work of *cure*. When patients have passed into the chronic state of the disease or are considered incurable, they should be provided for in different establishments where the best sanitary agencies can be most successfully applied. In hospitals connected and managed expressly for curative treatment, there would be we believe more than 30 or 40 per cent. of the patients cured and not 60 or 70 per cent. become dependents for life. It is this feature in the present system, *chronic insanity*, that makes the expense of supporting the insane so great and burdensome both to the state and to individuals. Besides, if this unfortunate class, the chronic insane, comprising now nine-tenths of the inmates of hospitals, could be more widely diffused—could have proper employment, greater liberty, more homelike surroundings, and a portion of them have the advantages of mingling freely with sane people—more of this class would be improved, and more too would be cured than now are. Again, let lunatic

hospitals be carried on like other hospitals. The superintendent should be a man of age and experience. He should be thoroughly acquainted with other diseases, especially those of the nervous system, and nowhere can this knowledge be obtained so well as in the general practice of medicine. Let the places of assistant physicians be filled, as in other hospitals, by competitive examinations. We should then have in these positions men, not only of the highest order of talents, but those engaged from choice zealously and heartily in this work. Then there should be a consulting board composed of several physicians who should attend at the hospital regularly, or be so situated that their services can be called in whenever desired.

In no other diseases are counsel and advice more needed, or where they can be made so useful as in disorders of the mind. Connected with this reform there are two other considerations. Some special means should be employed to interest and educate the medical profession generally upon insanity. It should be introduced into all medical schools as a very important department of study and lectures. It should be made far more prominent in the proceedings of the American and other medical associations as well as in medical books and journals. Physicians in regular practice would then be prepared to treat more successfully this disease at home in its primary stages as well as in its milder forms.

The remarkable trial just closed at Washington for determining the sanity or insanity of an individual, affords striking proof and illustration of the facts we have stated. No stronger evidence could be adduced of the great want of correct views generally on this subject, and how unsatisfactory and conflicting was much of the testimony of even expert witnesses. However sad and distressing were the circumstances connected with this case, it may teach our people one thing, viz: More instructive lessons on insanity than could be obtained in any other way.

The last and perhaps the most important desideratum is a good lunacy commission. For twenty-five years such a commission has proved a most useful agency in effecting improvements in the hospitals of Great Britain as well as in other European countries. Such supervision is greatly needed in all our states. No one thing would do so much to advance in every direction the interests of this cause

as a lunacy commission, 'properly organized and constituted.

While it is generally admitted that the lunatic hospitals of Great Britain are far in advance of ours in dispensing with mechanical restraint, in allowing the insane greater liberties, in providing to a larger extent more and different kinds of employment, and in a better classification of patients, there are marked indications that improvements in our hospitals are beginning to take place. Much greater interest is manifested upon this subject than formerly.

Important questions like the following are asked—Why should the insane increase so fast? Why should these hospitals be so rapidly filled, and always kept crowded? Why should the *cures* be only about one-half of what were once reported? In what way can the chronic insane be best supported? Can not something be done to reduce the magnitude of these evils or curtail the enormous expenses incurred for this unfortunate class? In the attempts to answer these inquiries, improvements must follow. Such reforms never go backward. Science and humanity are enlisted in their favor. They demand a more correct and thorough knowledge of insanity in the medical profession, as well as greater skill and humanity in the treatment of the insane.

Michigan State Board of Health.

Reported for the CINCINNATI MEDICAL NEWS.

THE regular quarterly meeting of this Board was held January 10, 1882, at its office in Lansing, the full Board being present. The Secretary presented his quarterly report, showing some of the work in the office during the past quarter. The quarter had been a very busy one, made so, in part, by the numerous outbreaks of diphtheria, scarlet-fever, and small-pox in the State, which had required much correspondence and the sending out of many documents. The compilation and issuing of the weekly bulletin of health in the State is now so systematized as not to take as much time as at first. It is published in probably two hundred newspapers in Michigan. In response to a request, fifty seven health officers of villages have begun to make weekly reports of diseases. The Board reaffirmed the demand for these reports from health

officers of cities. To each place in the State where diphtheria, scarlet-fever, or small-pox was reported present, a letter was written to the health authorities giving full instructions and suggestions how to prevent the spread of the disease. Documents containing elaborate and particular directions have been sent for free distribution throughout the vicinity. Each officer was requested to make a special report on the epidemic under his care, and some of the reports show how by determined action to stamp out a contagious disease. The number of communications written during the quarter was 1,459. The number of diphtheria documents distributed was 29,000; of scarlet-fever documents, 5,000; of general rules for restriction of contagious diseases, 6,000; reprints of weekly bulletins, 7,000. As showing the necessity for inspection and disinfection of immigrants, their clothing, baggage, etc., and especially for a system of surveillance to their destinations, a statement was made by the Secretary, of the introduction of typhus-fever in Benzie County, by Norwegian immigrants. The disease made its appearance over sixty days after the arrival of the immigrants, and spread quite freely (not being reported at the time or treated as a contagious disease by the local authorities), causing many cases of illness, and at least, three deaths. The importance of inspection of immigrants at Port Huron and of keeping those believed to be liable to spread communicable diseases under surveillance until their destination is reached, and then placing them in the watchful care of the local board of health, was freely discussed. As this Board has no funds available for such a purpose, the subject was referred to the president, secretary, and Dr. Lyster, to confer with the National Board of Health, and take such action as is possible.

A report by Hon. Le Roy Parker relative to duties of health officers in verifying diagnoses of contagious diseases was read and ordered printed in the Annual Report. Mr. Parker reported the following:—In Gaines township, Genesee Co., a child of Mr. B—s died of what a doctor called malarial fever, and did not report the case to the Board of Health, though it seems probable that it was really diphtheria. A neighbor and wife, Mr. and Mrs. B., assisted in preparing the corpse for burial. About the same time a child of Mr. S. died from “sore throat,” not reported as “dangerous to the public health,” and some of the chil-

dren of Mr. B. attended the funeral. Soon after Mrs. B. was taken sick with diphtheria, and in turn thirteen out of fourteen members of the family had it, and seven out of ten children died. The Board of Health promptly isolated this household, but the attending physician's error in diagnosis, or failure to report the first case, was fatal to the hopes of that family. In this connection the Board adopted the following preamble and resolutions:—

Whereas, It is often difficult to recognize mild cases, of diphtheria or to distinguish such cases from a simple pharyngitis or laryngitis, and,

Whereas, Such mild cases of diphtheria often communicate a dangerous and fatal form of diphtheria,

Resolved, That it is the duty of physicians and householders in reporting diseases dangerous to the public health, and of local health authorities in their efforts to restrict such diseases, in every case to give the public safety the benefit of the doubt.

Resolved, That suspected cases of dangerous diseases should be reported, and precautionary measures should be taken.

Drs. Kellogg and Avery were appointed a special committee to report on the present knowledge of diphtheria, and Dr. Lyster was appointed a special committee to report upon the present knowledge of typhoid fever.

Mr. Parker reported that persons guilty of removing contagious disease placards from their houses could be punished under the law which made the house in which the contagious disease was, a hospital, if declared so by the Board of Health, and subject to their rules and regulations. All rules and regulations of a board must first be published, then penalties may be inflicted for any violations.

Dr. Avery, as special committee on the subject, made a report relative to the overflowed lands in Gratiot and Clinton Counties, and presented a resolution from the Board of Supervisors of Gratiot County. In accordance with the report the Board adopted a preamble and resolution as follows:—

Whereas, The Board of Supervisors of Gratiot County has passed resolutions asking this State Board of Health to investigate the subject of the sickness caused by the overflow of Maple River, because of the dam at Maple

Rapids, and "to advise the removal of said dam as being detrimental to the health of the communities living in the vicinity of said river," therefore,

Resolved, That the Board of Supervisors of Gratiot County be informed that this Board has already had an investigation made, and from the report of such investigation is convinced that the dam at Maple Rapids causes a nuisance and advises that, in case the owner of said dam will not remove the same and thus abate the nuisance caused by the overflowing of land along said river, a bill in equity should be filed against the owner of said dam to compel him to remove the same.

The Secretary was directed to correspond with persons in some city in the western part of the State relative to holding a second Sanitary Convention this winter. One will be held at Ann Arbor, February 28 and March 1. These conventions are held in accordance with invitations received from citizens, and under arrangements made by a local committee acting with a committee of this Board.

Dr. Hazlewood reported on the inspection of summer resort hotels as regards danger from fire, and asked if the present law providing for such inspection was not sufficient. Dr. Baker thought the law should be amended so as to take the inspection duties away from the political officers and place them among the duties of Local Boards of Health. The question was referred to Mr. Parker, committee on legislation in the interests of health.

The Secretary presented a report of work of Local Boards of Health, showing much good work done during the past season in the restriction of contagious diseases. He read letters showing the action of Local Boards of Health with contagious diseases, one from J. R. Thomas, M. D., health officer of Bay City, relative to diphtheria; one from W. G. Elliott, M. D., health officer of Pontiac, relative to scarlet-fever; and one from Foster Pratt, M. D., health officer of Kalamazoo, relative to small-pox.

The Secretary also read a resume of work of other State Boards of Health, and it showed that typhoid fever was very widely prevalent, that small-pox was very prevalent in the Northern and Northwestern States, and that intermittent fever was present in Connecticut, Massachusetts and Rhode Island.

The next regular quarterly meeting of the Board will

be April 11, 1882. There will probably be a special meeting of the Board in connection with the Sanitary Convention at Ann Arbor, February 28, and March 1, 1882.

SELECTIONS.

Retrograde and Lateral Movements with Hypnotism.

BY ISAAC OTT, M. D.

WHEN cold is applied to certain definite regions of the skin in pigeons, they exhibit retrograde movements alternating with fits of stupor. The agent, so far, has been rhigolene, to produce the necessary cold. Ether, when vaporized, was totally unable to produce any effect. The region to which the cold must be applied is the skin of the back of the neck. These phenomena were first observed by Dr. S. Weir Mitchell. I have lately been studying the effect of irritants on the skin of pigeons, and the seat of the phenomena produced. I found that ether, alcohol, chloroform and nitrite of amyl were powerless to produce the effects seen after the application of rhigolene. If, however, bisulphide of carbon was dropped on the skin of the back of the neck, then all the phenomena produced by rhigolene ensued in a marked manner. Thus a single drop of the bisulphide of carbon applied to the back of the neck of the pigeon caused him to retrograde and to pass into states of quietude. When bisulphide of carbon is applied to the skin of the neck in pigeons, the birds run forward as if no agent was acting on them, but suddenly they commence to run backwards, it being quite evidently against their will, as they seek to overcome the tendency. During the period of quietude, the body sinks down somewhat, the head being drawn in close to the body and bent towards the ground to a considerable extent. That these phenomena are due to a simple irritation of the nerves, is proved by an experiment where I attached a small bull-dog forceps to the skin on the back of the neck, when similar retrograde movements ensued, followed by a period of quietude. As remarked by Dr. Mitchell, these phenomena are reflex in their nature. Here the mechanical irritation of the sensory nerves is reflected

on the central nervous system, causing it to evolve the phenomena under consideration. To more accurately determine the seat of these phenomena, I have made some experiments: In a pigeon under ether, the skull was trephined and the cerebellum broken up. When the bird recovered from the operation, that is several hours afterwards, rhigolene was applied and the bird exhibited the same phenomena as an uninjured one. In another pigeon the skull was trephined and the cerebrum broken up; then, after a period of several hours, the bisulphide of carbon was dropped on the skin of the neck, when the pigeon began to make retrograde movements and to have periods of quietude. The bird did not run forward, which was due normally to cerebral action when the bisulphide was applied. Hence, the forward movement after the application of either rhigolene or bisulphide of carbon, was due to cerebral activity. These series of experiments seemed to demonstrate that the cervical reflex had its central origin at the base of the encephalon, for the cerebrum and cerebellum did not seem necessary for the production of the phenomena in question. Section of the semicircular canals had no effect on these phenomena, except to make them more complicated.

Now, when the cerebrum is destroyed, the nervous system of the bird is a mere automaton, played upon by appropriate external agents. These agents, in the phenomena under consideration, are rhigolene, bisulphide of carbon and mechanical irritation. The inquiry now arises: how do you explain the phenomena in question? It is well known, since the time of Magendie, that in the corpora striata are seated ganglia, causing the animal to run backward. Not only does the bisulphide, when placed on both sides of the median line of the back part of the neck, cause the bird to run backward, but when it is placed to the right of the median line, the bird runs in a circle towards the left. A drop on the left of the median line causes the bird to run to the right. The rule here is, that the bird makes a circular movement opposite the irritated side. It has seemed to me that these phenomena of lateral movements in pigeons can be explained as follows: According to Chauveau, the sensory fibres do not decussate in pigeons, and if an irritation is made on one side of the median line the impression ascends on the same side, and calls the retrogressive ganglia of that side only into activity, which

activity is expressed on the opposite side of the body, due to the motor decussation. Now the retrogressive ganglia are in power over one side of the brain, whilst the other side of the brain, under the influence of the cerebrum, is disposed to move the opposite side of the body forward; hence the bird can not go directly forward, but deviates to the side where the retrogressive ganglia have shown their activity—the bird moves in a circle. The action might be compared to that of driving a horse forward, and at the same time strongly pulling one of the reins, the checking rein corresponding to the side of the brain under the influence of the retrogressive ganglia. If now the skin on both sides of the median line is irritated, then the retrogressive ganglia on both sides of the brain are dominant, and the bird moves backward, notwithstanding all efforts to prevent it. It might be compared to a horse pulled on his haunches by two strong check-reins. The periods of quietude, either preceding or following the external application of bisulphide of carbon, are to be explained. It is well known by Kircher's "experimentum mirabile," that chickens, when held down, pass into a state, called by Czermak, hypnotic. In fact, Czermak has been able to produce a hypnotic state in pigeons and other birds. He found if he held the pigeon on its back and rubbed him softly in the parotid region, that the pigeon closed and opened his eyes, made strong respiratory movements and passed into a state of perfect quietude, called by him hypnotic. In my experiments on pigeons, the state of quietude is actually hypnotic, as the bird exhibits similar phenomena, opens and closes his eyes, breathes heavily, and remains perfectly quiet. It strikes me that this hypnotic state can be explained by sensory irritation, produced by the bisulphide of carbon calling ganglia at the base of the brain into activity, which ganglia have an inhibitory power. That sensory irritation may come into play is shown by Levisson's experiment with the frog, where simply tying his anterior extremities and placing him on his back keeps him in a state of quietude. The rapid breathing also indicates a strong sensory irritation. In my experiments, the temporary irritation explains the temporary hypnotism. With this method of viewing matters, the phenomena of hypnotism have nothing to do with the cerebrum, but are caused by ganglia at the base of the brain inhibiting the will.

In cats and rabbits the application of bisulphide of carbon to the skin on the back of the neck, causes them to run forward and to leap up in the air. I have not been able in animals, so far, to produce movements similar to those seen in pigeons, but hope shortly to find some animal in which they can be produced. This whole subject is important, not only to the physiologist, but also to the pathologist.

Abuse of the Vaginal Speculum.

A FEW days ago a gentleman in a highly respectable position in society in the north of England, called on me for advice in the following peculiarly painful circumstances. He averred that through the use, or rather the abuse, of the vaginal speculum he had lost, as he feared forever, the affection of his wife, who is, I may say, an amiable and accomplished lady. His case interested me so much, that I asked his permission to publish it in the *Lancet* [from which we extract.] This he at once agreed to; not only so, but he wrote out a history of it himself, so that I shall for the most part allow him to tell his own story.

No instrument is of more importance to a medical practitioner, than the vaginal speculum; still the facts narrated below must impress us with a grave sense of the responsibility which at all times rests upon us in the use of the instrument; and how, without any intention on our part, the peace, the happiness of a household, may be broken up forever. But let the chief, not the only, "victim" speak:—

"I was married to a charming woman. Our happiness continued fifteen years. She became the mother of a family. Then some little ailment set in, which was described to me as a simple case of ulceration. The os uteri was touched with nitrate of silver very frequently during a period of three months, and then she was pronounced completely cured. For that three months I was strictly abstinent. She became warmly attached to her doctor, saying he had saved her life, though he generously enough admitted that it was only a common case, and that her life never was in danger. Then, as time wore on, there were more ulcerations, more examinations, and all the rest of it; accompanied by periods of abstention on my

part, one of them lasting about nine months. During the period of this treatment I, in some unknown way, lost my wife's love. She seemed never happy unless when from home and seeking after advice, which she had from half a dozen doctors. I put my foot down at length on one of her proposed arrangements, and then for several years there was a vacuum, which was ultimately filled by another, and non-medical, influence, that induced her to leave my roof, and resolve on final and permanent separation. Thus the social ruin of a large family—of daughters and sons—seems due to the use of the speculum, and the estrangement caused by the injunctions of 'ladies' doctors, which, I am told, they never impose upon themselves."

Such is my patient's narrative. To all appearance the lady is in the best of health, though, professionally, I have not seen her. What is my patient to do? For the sake of his family he is very unwilling to expose them in a law-court. He had tried to win back his own and her love and affection. He ascribes the origin of all his trouble, rightly or wrongly, to the speculum and abstinences. We know from experience that when the use of it, or the catheter, is continued for some time to nervous, hysterical ladies a morbid craving for its continued use is created; and therefore we can not be too discreet in the use of these instruments.

My friend concludes his letter with some practical advice, under four heads, which are indicative of the points on which he makes complaint. To the credit of the profession, I think I may say, the great majority of medical men already act up to them:—

"The instrument may, or may not, be useful, for aught I know; but I maintain: (1) That when it is employed another lady ought to be in the room; (2) that its employment ought not to be continued against the doctor's own opinion merely to gratify a craving, or solicitude, for examinations, which its use has seemed to me to create on an apprehensive, highly-strung woman; (3) that doctors are not at liberty to augment their influence by creating the fear of insanity in such natures by expositions of a near connection between uterine ulceration and the nervous system; and (4) that when a husband's abstinence is imposed its extent should be stated direct to himself, and not merely transmitted through the wife."

These suggestions, especially the first and fourth, will,

I think, commend themselves to every member of the profession. By attention to them we avoid even the "appearance of evil."

Perhaps some of your numerous readers would give their advice in reference to the above case in its moral and social, as well as its professional, aspects; and especially as to right professional practice in cases where the speculum is used and abstinence imposed, with the risk, it would seem, of destroying conjugal affection.

Yours truly, M. D.
—*Boston Medical and Surgical Journal.*

"Sponge Grafting."

BY H. H. A. BEACH, M. D.

SURGEONS have long recognized the difficulty in removing sponges, unprotected by a fold of cloth, from raw surfaces to which they have been applied some hours before, as compressors to check hæmorrhages. Granulations shoot into the interstices with great rapidity and their rupture is necessary before the sponge can be separated from the fresh surface.

Dr. D. J. Hamilton* has made a careful study of the condition of the sponge, and wound under these circumstances, and, with the aid of microscopical observations, determined that the sponge becomes vascularized, as in the case of a clot, and may become the medium for the construction of new material in the healing of wounds and ulcers. The paper is one of exceptional interest and is deserving of careful consideration and verification. He concludes with the following suggestions:—

"Having once recognized the principle that a porous body may become vascularized, and be the medium for the construction of new tissue, the application of the method to various purposes naturally suggests itself. In applying any porous body with a view to this organization, certain points must always be kept in mind. The porosity of the body must be such that all the canals freely communicate. Sponge is exquisitely suited for the purpose on account of the free anastomosis between its channels,

*Edinburgh Medical Journal, November, 1881.

but many other substances might be utilized in the same way. I have of late thought that charcoal or calcined bone might be employed in certain cases. For one purpose at least such a solid framework might be useful. Where it is desired to prevent contraction of the newly formed tissue where it cicatrizes, where it is of moment to retain the newly formed tissue of its original bulk, then a solid framework must be employed. A solid framework will, I feel sure, organize just as a sponge would, and will have the special quality of preventing cicatricial shriveling. When once incorporated with the tissue, it will not cause any more irritation than the calcareous matter of a bone does. A dead body of this kind is not of itself an irritant. It is the injurious application of it, or the septic matter which it may introduce, which gives rise to the mischief.

"Such a solid framework, it strikes me, would be particularly useful for forming new bone. One of the great dangers of a simple periosteal detachment operation is that the future bone is not sufficiently bulky and strong. By supplying a solid framework of this kind we would avoid this, and the formation of bone would proceed within it just as well as in the spaces of cartilage or the meshes of a fibrous tissue. Bone is nothing more than a fibrous tissue, modified by being impregnated by calcareous and other salts. The particular elements which go to form bone are nothing more than connective tissue corpuscles, and by supplying a framework of the above nature for these to ramify within, bone might be grown to an almost unlimited extent. The spongy framework, I should think, although I have not as yet had any practical experience in the matter, would be rather too yielding, and would be liable, when infiltrated with bone elements, to contract. Whether the formation of bone would commence early enough to prevent this I do not know. It is quite possible that it might.

"Wherever it is applied, it must be always remembered that the sponge or other framework must be employed merely for the purpose of filling a vacuity, otherwise it will cause great inflammation, and the efforts at organization will not proceed. My experiments so far have shown me that, if thrust between two portions of a muscle, for instance, without a portion of the muscle being excised, organization does not proceed nearly so equally as

when a piece of tissue is removed and the sponge merely takes its place. The reason is obvious. If thrust between the muscles of a part it will, especially when it gets softened by the juices of the tissues, tend to swell, and, by pressing on neighboring blood-vessels, will interrupt the circulation within them and so induce an inflammation. Where it merely fills a vacuity, however, the case is very different, and organization will then follow. Before being applied it should always be rendered antiseptic, and, of course, this specially holds good of its application to a fresh wound.

"Every one will admit that nothing is more conducive to putridity in a wound than a septic sponge, while, if applied in an aseptic, or rather antiseptic, condition, and dressed with the view of retaining it so, it can be kept, as shown in one of my recorded experiments, perfectly free of putrefaction through a period of several months.

"So far as I see at present the method of 'sponge-grafting' seems excellently suited for growing new tissue where that is insufficient to cover a part or to allow of stretching, but whether it may not have a wider range of application remains for future experience to demonstrate. The only objection which I perceive to its application is the somewhat long time required to organize it. During the first ten days I found that a part of a sponge placed in the abdomen, had organized from an eighth to a quarter of an inch, but it always happens that one part organizes quicker than another, and hence, although in a large wound one part may thoroughly organize in, say, a month, other parts of the same sponge require longer. I can not see, however, what objection there would be to the patient going about, if this were practicable, after the sponge had once become fixed. On the contrary, I should think that this might actually, in certain cases, exert a beneficial influence upon the organizing powers of the tissues."

Papaya and Papain.

Translated from *Berliner Klinische Wochenschrift*, August, 1881.

BY SAMUEL BRANDEIS, M. D.

IN one of the sessions of the Academy of Sciences at Paris, France, in August last, Mr. Bachut made some com-

munications regarding the sap of a plant growing in Brasilia, whose botanical name is *Carica Papaya*, which, according to investigations made by him, with the assistance of Professor Wurtz, possesses distinct digestive and peptonifacient properties. The sap, which is obtained by incisions made into the bark of the plant, and still more so the essential principle prepared from the same, which has been named Papain, if for a certain time left in contact with albuminates, raw meat, fibrin, glue, milk, etc., will enter upon combinations which present all the characteristics of assimilable Peptone. Croupous membranes, ascariides, tape-worms, were changed in a similar manner, even outside the body.

The statements made at that time, Buchut recently revised and enlarged, reporting experiments, which show that this vegetable pepsin exercises its digestive power even upon living tissues. One gramme of a ten percentic solution of papain, or one gramme of a solution of the sap, in the proportion of 1.5, injected into the brain of an animal, with a Pravaz syringe, proved to have effected a complete peptonic change in the tissue, twenty-four hours after the operation. Upon living muscular tissue the same material injected, acted in such a manner that, twenty-four hours after, a soft, pulpous and gelatinous substance is found in the injected locality. Further injections, of the same kind, were made upon the cervical glands. After three days, which were characterized by great pain and high fever, the injected glands were found to be softened and turned into abscesses, which could be lanced and emptied of their contents.

In one case of cancer of the breast, and in another, of scirrhus of the inguinal glands, in the clinic of Professor Pean, in the Hospital St. Louis, softening and disintegration of the diseased parts was induced by treatment with Papain. Some of the fluid contained in the softened growth was afterwards subjected to chemical analysis, in the chemical laboratory of the medical faculty, by Professor Henning, and proved to be pure peptone with all its characteristics. According to one of the investigations, 47 grammes of the fluid contain 2.91 grammes of albumen, which again contained 0.565 of peptone after being dried at a temperature of 110°. The same result was reached by other investigations, and confirmed by all chemical

tests. All the cases like those formerly mentioned were accompanied by great pain and high and violent fever.

In conclusion, Buchut reports an experiment on a living frog. The animal was partially stripped of its integuments and then completely dipped in a papain solution. After twelve hours, the animal was dead; after twenty-four hours partially digested, and after two days nothing but the skeleton was left.

Vegetable pepsin, consequently, digests living tissue as well as it digests and destroys dead material, outside of the body.

Remarks.—The great question now arising is, whether this powerful digestive drug will not extend its digestive force over the tissues of the stomach, into which it is introduced for curative purposes, and therefore be destructive in its *modus operandi*. If such is the case, papain would have to be expunged from our medicinal armamentarium. Further experiments must decide this before it may be advisable to introduce it into therapeutics.

Milk-Sickness.

From Louisville Medical News.

BY JOHN M. JACKSON, M. D.*

In compliance with the request of the president of this association, at our last meeting in the city of Paducah, I have prepared and now present to you this essay upon the disease, so well known in this country as milk-sickness. As the disease is confined to limited parts of the Union—viz. Alabama, Indiana, and Kentucky—medical literature is almost silent in reference to it. My remarks must be chiefly confined to my own personal observations.

My first intercourse with the malady began in 1852, since which time I have met with it more or less frequently at some period of almost every year. This disease is strictly endemic in its nature, confining itself to very small and restricted localities, sometimes to a space of country of not more than a very few square miles. Within a radius of only two or three square miles, it has been found on

*Read before the Southwestern Kentucky Medical Society, in the city of Columbus, Ky., Wednesday, November 9, 1881.

Mayfield's Creek, Graves County, Ky., and also in like manner in the neighborhood of Wesley in this (Hickman) county. Its territory of invasion, in this vicinity, begins a short distance below the city of Hickman, and extends up the Mississippi River to a point within two miles of this city, reaching out about five miles from the river. Its chief locality is upon the land known as the Baker tract, about five miles southeast of this place, at which it is known that at certain seasons of the year a cow can not run at large for a period of twenty-four hours without being affected with the disease.

The disease first originates in the quadruped, most generally the cow, and from her meat, milk, or butter it is conveyed into the human system. I know of no instance in which it has been otherwise communicated. Birds, such as vultures and wild turkeys, contract the malady by eating the flesh of animals that have died from it. My two first cases of milk-sickness evidently originated from the eating of a piece of wild turkey, as the cases were both of easy diagnosis, neither beef, butter, nor milk having been eaten or drunk, and the only meat eaten by the patients was that of the wild turkey; and after the facts had been investigated, the party killing the turkey remembered it was unusually gentle and tame, showing it was probably sick when killed.

In dwelling upon this subject, it will not be amiss to make a few remarks in reference to its symptoms in the quadruped, as an acquaintance with the symptoms of the disease in the lower animals might enable us often to avoid contracting it in man.

Cows giving milk do not manifest strong and decided symptoms, as the milk being a potent eliminant carries off the poison, and imparts the disease to her calf and the persons who use her milk. The cow affected with this disease is very docile and sluggish, showing no disposition to move or to take exercise; generally takes her position on the sunny side of a house, fence, or tree, leaning against the same, apparently asleep. In this condition, if forced to take active exercise by being actively driven a few hundred yards, her condition becomes at once unmistakably apparent. Her eyes become glassy and watery, and her whole muscular and nervous systems are thrown into a violent state of agitation. If then she is forced to move off rapidly, after resting a few moments, she trembles,

shudders, and falls to the ground, and frequently rises no more.

When these symptoms, even in a slight degree, are found in the cow, we can not be too careful in rejecting her meat, milk, or butter, or letting her to her calf.

As to the manner in which this disease is contracted by the quadruped, it remains, and I fear will ever remain, a conjecture and a matter of speculation. Some contend the poison is in the water, others in a vegetable, and others that the disease originates from some poisonous gases emanating from the earth in the localities in which the disease abounds. I am inclined to the opinion that the poison, whatever it may be, is of the acro-narcotic class, and that it exists in the seeds of some vegetables, or *a priori* it may be from a gas produced from the ground under certain thermal conditions of the earth not understood. If from water, it would exist as well at one season of the year as another; if from the green stalks or leaves of a vegetable, the disease would prevail in the spring time, but we rarely find the disease exist before the first of August nor after the first of November; but this rule has some exceptions. My friend Dr. A. J. Watson, of this city, met with a case during one of the coldest months of last winter; but this is by no means the rule.

My reason for believing that the malady is produced from the seeds of a vegetable is that the disease manifests itself just at that season when seeds have matured. But whatever the cause may be, we know of but one means of avoiding it, and that is to ascertain its area of ground and fence in the same.

In the human subject this disease at its commencement is marked by the usual symptoms of a chill, followed by imperfect reaction, the chill often lasting four to six hours. The febrile movement following the chill is of a very low grade, temperature only a few degrees above normal. The pulse is rapid, often running as high as 130, very short and compressible. There is a peculiarly anxious and depressed expression in the face, and from the beginning a sense of nausea attended with a constant load and weight in the epigastrium. This latter symptom has been constant in every case I have met. The patient will tell you that he is certain that a hard, round, and hot ball has formed in his stomach, and begs you to extract it by some means.

Constipation is an obstinate symptom in this disease from the beginning to the end. The patient calls for ice-water; seems to be inclined to sleep, but at the same time is conscious of everything said and done by any one in his room. There is constant nervous retching in every case, attended by great and ungovernable agitation of the muscular system. If a cup of tea or a spoonful of soup is offered the patient, such is his muscular convulsions that he can not hold it in his hand.

Anorexia is a never-failing trouble here, the patient abstaining from food for many days till convalescence is established. The skin in the extremities is generally cool and covered with a clammy perspiration. The hepatic and renal secretions suffer materially in this disease. The stools are light and clay-colored, while the urine is very scanty and in some cases suspended altogether for twenty-four hours. The breathing is generally slow and stertorous; the pupils are contracted. Pain in the region of the os frontis, often also in the locality of the medulla oblongata, attended with vertigo, are frequent symptoms. Stiffness and immobility of the joints are often complained of. I have never seen a case without them.

With all these symptoms, which are so strongly marked and uniform in every case, no physician can fail to make a clear and satisfactory diagnosis.

I stated before that I believed the disease was the result of the action of some acronarcotic poison, and will now state that this poison makes its pathological impression on both the cerebro-spinal axis and the ganglia or great sympathetic nervous system, and especially the latter, as we find all the functions of the various important organs suspended, and some totally arrested.

Taking such pathological views, I proceed as follows in my treatment: When called to a case in its incipency, if the contents of the stomach have not already been ejected, my first effort is to empty the stomach by a potent and prompt emetic. This I usually do with pulvis ipecacuanha or tinct. lobelia. To allay pain in the epigastrium I give large and prompt doses of belladonna, either in the form of the tincture or fluid extract; at the same time I do not forget to apply a blister over the region of the stomach. This latter remedy I conceive to be of great importance, and from it have found marked relief. Hot fomentations over the bowels and stimulating cataplasms to all the ex-

tremities rarely fail to give more or less relief. Mercury, either in the form of the hydrarg. chloridum mite or pil. hydrarg., combined with five-grain doses of subnitrate bismuth, are strongly indicated; and, so far as the mercury is concerned, I do not think it can be dispensed with. In mild doses it allays the gastric irritation, and at the same time does what no other known remedy can do—acts powerfully on the dormant liver, arouses it from its lethargy, and restores it to its normal functions. Quinine in small doses, combined with carbonate of ammonia, is generally beneficial to equalize the circulation and promote the normal action of the heart and arteries.

But there is one remedy, which I have not yet mentioned, from which I have derived more decided relief in this disease than all others combined, and that is strychnia. This drug, in doses of from one-sixtieth to one-fortieth of a grain, or tinct. nux vomica in doses of from seven to ten drops, repeated every three or four hours, seldom if ever fails to give marked relief, and should be given from the beginning to the close of the disease.

The prognosis of milk-sickness is generally favorable. It is an obstinate and tenacious disease; but, if carefully nursed and properly treated, seldom proves fatal.—*Columbus, Ky.*

Clinical Lectures.

ACUTE PSORIASIS.

GENTLEMEN:—The case I now present to you has been at this clinic on two previous occasions: on the 17th of December, a few days after his admission to the hospital, and since then, quite recently, he was before you again. You recall his history; when he first came in he was suffering with a skin affection of only a few days' duration. The rash had first appeared on the hands and arms; it was very red, and itching; there were also marks made by scratching with the finger nails. I told you then, that the affection was in an acute condition, and although the diagnosis was psoriasis, yet the remedies usually directed to the treatment of psoriasis in its chronic stage—arsenic, for instance—at that period would be inadmissible. He was, in view of its recent appearance, ordered alkaline baths, and placed upon a plain, unstimula-

ting diet, with proper attention to the secretions; and as a result the red, inflamed appearance of the arms, and afterward of the legs and the back, rapidly faded away. Then the disease assumed the chronic form, and about the first of the year, or four weeks after the commencement of the disease, he was given the special treatment by arsenic (sodium arseniate gr $\frac{1}{30}$ every four hours), and since then the improvement has been far more rapid and decided than it was before.

I present him to-day cured, and ready to leave the hospital. He says that he now feels well, and only experiences a little irritation, occasionally, of the skin, which otherwise is healthy. I show you the rapid result of treatment in a case of acute psoriasis of recent development; the cure was less prolonged than in the usual chronic form of the disease, when the skin changes have advanced to a greater degree.

FACIAL ERYSIPELAS: ALBUMINURIA.

Our next patient has been in the house only three days, suffering with facial erysipelas. At the time of admission he had been away from this hospital only six days; having been here since the 12th of December, under treatment for an attack of acute bronchitis, of which he was cured. He left on the 15th of this month, and was well only three days. At this time (three days before his return) he had a chill, which he thought was due to cold, but it was followed by fever and free perspiration. That night he had a burning, stinging sensation in the right cheek, and on the nose; the following day he noted that the parts were swollen and slightly red; since then the discoloration and swelling have increased quite rapidly, spreading over the upper half of the face and the right side of the neck and the ear. Owing to the zinc ointment that has been placed upon it, the redness of the skin now is not very apparent, except upon close inspection, but the swelling can be appreciated by all of you. The ear is much swollen, and this right eye he is unable to open, partly on account of the eyelashes adhering together by the secretions, but principally owing to the swelling of the lower lid. At the lower border of the rash, especially upon the nose, there have been some small vesicles or blebs; these are now dried up, forming a crust upon the cheek and side of the nose.

With regard to the temperature, we observe that upon admission the thermometer recorded 103° in the axilla; his pulse was 100; respirations 24 in the minute. His tongue was coated. Pain and restlessness entirely prevented sleep during the first night after entering the ward. As in all these cases, the urine was carefully examined. Its condition on the day of admission was as follows: specific gravity 1.012, acid, light colored, and contained a trace of albumen; no casts could be found. This condition of the urine, as was pointed out by Dr. DaCosta some years ago, as you know, is always to be found in facial erysipelas, even in cases of moderate severity; at some period of the disease, usually at its height, the albumen may exist in very considerable amount, and casts may also be present.

In regard to the treatment, he was placed upon tincture of the chloride of iron, twenty drops every three hours; and as he was very weak, his strength having been reduced by the previous attack of bronchitis, he was given quinine (gr. x daily) in addition. He had plain, nourishing food, but no stimulants.

His temperature record is interesting. It was noted, upon admission, that his temperature was 103° , pulse 100, respirations 24. On the day succeeding his reception the inflammation was spreading over the right side of his face, the ear, and around to the back of the neck; with this a temperature rise to $104\frac{3}{4}^{\circ}$ occurs, the pulse, however, is not modified, or only very little, being 120 at night. Then we have a subsidence of the inflammation, and with it a very marked fall of temperature to 101° , with pulse and respiration remaining about the same. Next occurred an extension to the other side of the face, swelling of the eyelids, closing the eye, etc., but it was only moderate, and was not so great as on the opposite side, but the temperature advanced to 103° . Now the inflammation is everywhere subsiding; his general condition has improved; the redness of the more recent parts is greater than that of the ones first involved; the temperature this morning is only 101° . The man, in reply to an inquiry, says he feels "sick enough," but the pain is rather better than it has been; he rested well last night. I can hardly imagine anything which makes one feel more miserable than an attack of facial erysipelas. If you only cover your face with a mask or handkerchief for a short time, you notice that it be-

comes annoying, and takes away your feeling of respect and comfort to a very great degree; add to this the distress of the disease, and the application of ointment to the face, and you will find it taking away physical comfort, often more than other and graver disorders.

The tongue is still coated, but is less dry than yesterday, and is much cleaner than when he came here. The tincture of iron will be continued, and also the quinine, with the benzoated zinc ointment to the face.

The urine will be again examined, in order to keep the record of the albuminuria, and also to see whether casts make their appearance.

ACUTE RHEUMATISM.

The next case I bring before you is one of acute rheumatism, in a man who works as an oyster dealer. He is thirty-five years of age, and has always been in good health, except having the ordinary diseases of childhood. We learn that about twelve days ago, after being exposed to cold and wet, he had a chill, and the following day noticed that the joints of both the upper and lower extremities felt very stiff; and two days later the knees, shoulders, arms and hands began to be painful, and were more or less swollen; especially was this noticed in the hands.

He says that this came on during the night, and on the following morning he found it almost impossible to move the limbs, on account of pain.

On admission, two days ago, he was very much in the condition I have just described. The pain was probably more marked in the knees than elsewhere, but the swelling was more evident in the wrists. His temperature was 101° , pulse 72, respirations 24; tongue coated; bowels regular; appetite lost or nearly so. It was impossible for him to rest at night, and he complained that he had not been able to sleep for ten days previous to admission. Let us examine into the present condition. This tremor of the hands, he tells us, has always existed, or at least since childhood. The wrist joints are very much swollen, not very red; he can move them now without causing great pain; the arm allows of passive motion at the elbow without much suffering. There has been no swelling in the shoulders. However, swelling in the shoulder is difficult to detect in comparison with the other joints, on account of the muscles that surround it. There has been

in this man more swelling in the arms than in the lower extremities. Examining the knee-joints I can find no evidence of fluid; the patella is firmly down upon the condyles. There is a good deal of stiffness in the muscles of the legs. On admission he was sweating profusely, and the skin is even now quite moist.

He was ordered to take salicylic acid (gr. x every two hours, until a drachm had been taken each day). Notice the temperature record, it has now dropped down rather suddenly to sub-normal (98°). The pulse has not been very high, ranging from 80 to 85. At the time of admission there was found a faint mitral systolic murmur at the apex, which I can not now detect; the first sound is normal.

Here we have the usual history of acute rheumatism. Notice that he complained at first of general feeling of weight and stiffness in the muscles. This, I think, is more general in its occurrence than your studies may have led you to infer. The pain is usually spoken of as being articular, although some of the authorities tell us that it may commence in the muscles and subsequently settle in the joints. I have observed, however, that even after the joints are invaded there is a good deal of pain in the muscles, but the severity of the joint pain causes the muscular trouble to be ignored by the patient, who thus has his attention called away from the less to the greater. Muscular soreness is, as a rule, called forth only in attempts at motion, while the joint pain is active and spontaneous. During the continuance of the joint inflammation the muscles are obliged to be kept at rest, and give no symptoms, but when the patient is getting better he moves about more and again becomes conscious of the muscular pain. The books state that the muscular pains return as the joint pains get better. The statement is quite correct, though not in this form; it is simply the fact that as the joint pains subside, the muscular pain again comes into notice. When we speak of acute rheumatism as an articular inflammation we are evidently only getting part of the truth; the muscles are as much invaded as the joints. I am clearly of the opinion that the muscular disorder persists throughout the disease.

A heart murmur is quite common in rheumatism, as you know, owing to rheumatic endocardial or pericardial inflammation. We have, therefore, examined this case

carefully, in order to anticipate such complication. A heart murmur was found, as I have said, but it was very faint, and not accompanied by much, if any, disturbance of the heart's action; and, as it was not persistent, we conclude that it was functional, and doubt if there has been any real change in the mitral valve. The patient is very pale and his appearance indicates a considerable degree of anæmia; and, as you know, in such cases we often have a murmur produced by the condition of the blood, and not due to disease of the valves; *i. e.*, functional and not organic. If there has been any endocardial inflammation here, it was only to a very slight degree, and the valves have not been permanently injured.

I wish to direct your attention to the prompt action of salicylic acid in reducing the temperature. It has fallen to normal, as you see, on the second day after admission. This is important, not only for its effect upon the pains and general condition, but particularly for its influence upon the heart; the reduction of the temperature is accompanied by slowing of the circulation and the rate of the heart's action. As the result the valves are much less likely to be damaged, the force and frequency of the cardiac contraction being thus greatly modified. When the heart is stimulated by the fever, and the valves are beating and rubbing together, one hundred and twenty to one hundred and thirty times a minute, you can see how readily change and deformity can occur; by reducing the number of beats we are, therefore, placing the heart in better condition for recovery. The salicylic acid, as I told you, has exerted a most salutary effect in this case. How long shall it be continued? The temperature this morning is subnormal; if the temperature this evening is subfebrile or normal, we shall reduce the dose to ten grains three times a day for the next few days; if the fever then does not return, we will suspend the acid and give some tonic. It is a mistake to stop the salicylic acid too soon. If it is stopped as soon as amelioration appears, a relapse often occurs. You know that these cases, owing to the restricted diet, rest in bed, and general care, rapidly improve, after entering the hospital, during the first day or two. This appearance is often deceptive; that it is really due to the hospital treatment rather than to medication is shown by the subsequent progress of the disease. We, therefore, do not conclude that after the few doses of

salicylic acid the patient is at once entering upon recovery, and has no further need of the remedy, but we should continue the treatment until convalescence is assured. I need not discuss the treatment, as you know in salicylic acid we have a remedy which meets the indications better than any other, in the majority of cases of acute rheumatism.

CATARRHAL JAUNDICE.

The next patient is one whose color will speak for itself. He is an Italian boy, who speaks almost no English, 15 years of age, and is a bootblack by profession. He says that he has always been healthy, except that about two years ago he suffered, during several months, with chills and fever in Italy, from which he fully recovered. He has been in this country about a year, during which his habits of life have caused him to be very much exposed to cold and bad weather, though, up to a month ago, he gives no history of illness. Then, he says, he had a chill, followed by some fever, of about twelve hours' duration, which he thought was a return of the old malarial attack; he subsequently had no further inconvenience in the interval, and persists in saying that he was well, and that he is well now. Later he noticed yellowness of the conjunctivæ—you see how yellow they are even now—and his face and body have also assumed this tint. He had no headache, nausea, or vomiting. The bowels continued regular, but the color of the discharges was unknown. (These were the notes on entering the ward, January 20th.) When admitted his color was very much as it is at present, but the conjunctival staining has markedly increased since coming into the house. His tongue was a little coated and slightly swollen; appetite was poor; he rested perfectly well at night. Since admission, also, the bowels have been loose and he has had as many as five passages in twenty-four hours, but they were more regular again during the last few days; he has only had three movements within the last twenty-four hours.

Now, what has been the cause of this jaundice? Personally, I never see a case of jaundice without feeling disturbed about it until I am familiar with its history, and know something of the cause of this disease. Probably no one symptom is less dangerous in certain cases than this, but it may also indicate a condition fraught with

danger to life, or threaten permanent injury to health. Therefore, until we know the cause in any given case, we should always regard jaundice as a symptom of gravity. In some cases it is due to a transient cause, and yields to simple treatment; in others it has serious morbid changes underlying it, which are not amenable to art.

As regards the history of such cases, the mind is usually clear and we can obtain a clear account. Our patient insists that he is well, and has been so since the chill, which was probably caused by exposure. I think the case is one of catarrhal inflammation extending along the ducts from the duodenum into the liver, without producing complete obstruction, but causing partial retention and re-absorption by the blood of the bile, after its secretion by the liver. I show you here what he passed this morning from his bowels. He has been on milk diet, which does of itself tend to make the excrement lighter colored than usual, but you see the bile is not completely absent. Here is no evidence of complete want of bile such as in the clay-colored stools that we often have in some forms of jaundice; this is fairly colored with bile. Here is a specimen of his urine, passed this morning; it is high colored and is a dark amber with an olive green tinge. It is of specific gravity 1.015, neutral in reaction, and contains no albumen. It has, however, an excess of biliary coloring matters, which are made evident by the ordinary reaction with nitric acid; in Gmelius' test, overlying the acid with the urine, the ring of colors is well shown.

His treatment since admission has been a drachm of the phosphate of sodium three times a day, and the strict adherence to a milk diet; he has been kept in bed up to this time, that is, for seven days.

On the day following admission he complained for the first time of pain over the liver. Now, I will examine him in your presence, and see whether physical exploration will throw any light upon this symptom. I think you can all see as he lies upon the table this slight fullness directly over the hepatic area; and on palpation I find more firmness, more resistance than on the other side. Percussing in the line of the nipple, dullness appears at the border of the sixth rib; the note becomes gradually tympanitic below the free border of the ribs, but not abruptly clear. Over in the epigastric region I can feel the outline of the liver very distinctly, and he complains of some

pain from my manipulation; but there is no severe pain, and he does not wince when I press hard. This moderate enlargement of the liver is readily accounted for by the retention of the bile in the liver substance; it does not necessarily indicate any alterations of a permanent or organic kind. The boy has a better expression and a brighter look in his face than he wore a few days ago. The diarrhœa is also better. Bear in mind that this catarrhal condition not only extends from the ducts into the liver, but also along the intestine, and diarrhœa is therefore a symptom that often appears at one time or other in these cases. He has had no cough or catarrhal affection of the air passages at any time during the attack; there is no trouble here in the chest. He will, in the course of a few days, be allowed to go out, with a caution against exposure to cold; the jaundice may require several weeks before it gradually fades away.

ASCITES WITH MITRAL DISEASE AND EMPHYSEMA; PARACENTESIS

I will now show you a case which has been in the house since the fourteenth of November last. He was before you in my clinic of December 14th; at that time I told you that he was suffering with marked dyspnœa, and had coming on a new symptom. On examining him, we ascertained that he had emphysema and bronchial catarrh. Some time afterward, careful examination of the heart revealed a mitral regurgitant murmur, which the extreme dyspnœa and the noisy bronchial rales, had prevented us from ascertaining previously. When he was before you, his abdomen was very much swollen, as it now is again. I then told you that the orthopnœa was due more to the upward pressure of the ascitic fluid than it was to the condition of the thoracic organs. His treatment was elaterium, followed by other hydragogues, with a view of removing the fluid; the result was a diminution at first, but afterwards they lost their effect. We then gave him broom tea, of which he took one pint daily, and for a time there was again some decrease in the amount, but only for a time. Finally, we tapped him, on the third of this month, and obtained twenty-eight pints of straw colored fluid, alkaline in reaction, specific gravity 1.015, which was highly albuminous, and coagulated almost solid on the application of heat. After this he was much more comfortable; he was able to lie down, and could sleep at night.

Lately the fluid has again increased, and now, at the end of three weeks after the tapping, we find him nearly as much oppressed as before. Dr. Owens, our resident physician, will now again tap him, using the ordinary trocar and canula of medium size.

In performing paracentesis of the abdomen, although easy enough of execution, there are certain precautions to be observed. Where ascites is complicated with disease of the heart, there is some danger of failure of the circulation, from sudden removal of the fluid. We, therefore, seek to guard against this by applying a binder covering the entire abdomen; it is split into tails in the back, so as to permit of crossing, and is gradually tightened by assistants during the aspiration. The operation is performed in the sitting posture, in order to assist the flow of fluid. In order to prevent syncope, we give him a glass of brandy at the beginning; this is especially needed to prevent the diseased heart from failing. We should always ascertain the condition of the bladder before introducing trocar, as, if distended, it might be wounded; the point usually selected for tapping being in the median line, a little above the pubes. Local anæsthesia with ice or ether spray can be used, if thought necessary.

Having introduced the instrument, the trocar is withdrawn and the canula remains in the wound, through which the fluid flows in full stream. It is of a light amber color, and not quite clear, as it contains some fibrinous material; on boiling a little in this test tube, it becomes so solid that the tube might be inverted without spilling it out. It contains, therefore, a very large amount of albumen. In testing for albumen it is better to fill the glass about one-third full, and boil the upper part by applying the flame to the side of the tube, held diagonally; in this way we are enabled to note the change in color and amount of coagulation, in comparison with the unaltered fluid below; finally, all should be boiled together and set aside to deposit, in order to determine the proportion of coagulable albumen. A small amount of acetic acid added will keep the phosphate in solution. I find upon adding acid to this specimen, that there is considerable evolution of gas, probably due to the presence of carbonates. The amount of fluid is now nearly two pailfuls ($27\frac{1}{2}$ pints), and it will, probably, continue to leak after the canula is withdrawn, for several days.

We will now have an opportunity of again examining the condition of the liver, which we are anxious to ascertain, for such an amount of ascites is very rare from thoracic disease alone. Of course, as long as the fluid continued abundant, forcing the liver upward, and obscuring the lower hepatic outline by its own dullness upon percussion, it was impossible to decide this point.

I think that the evacuation of this fluid will enable the liver to come down to its proper position, so that its edge may be felt, but I will not make the examination until he has quite recovered from the shock of the operation. The abdomen now is quite soft and yielding, and the patient breathes more freely.

An examination of the liver, made subsequently to the clinic, by Dr. Hutchinson, under whose care the patient passed on the transfer of the ward, showed that the organ could be felt below the ensiform cartilage, but is lost under the arch of the ribs toward the right side; toward the left side the organ can be felt. The liver communicates a very distinct impulse to the hand. Dullness begins at the fifth rib and extends to the costal border in the right nipple line; in the anterior axillary line the dullness extends from the sixth interspace to $1\frac{1}{2}$ inches above the right costal border; in the posterior axillary line from the seventh to the ninth ribs. The spleen was found decidedly enlarged. This examination shows that organic changes have occurred in the liver, due to the impeded pulmonary circulation, which latter are partly due to the lung changes and partly and perhaps chiefly to the mitral insufficiency. What is this condition of the liver? Chiefly it is one of red atrophy, and with this is combined induration and fibrous contraction brought about by the chronically congested state of the liver tissue. Red atrophy, you know, consists in a dilatation of the hepatic venous radicles and of the capillaries of the liver lobule which empty into the veins. The constant distention of the capillaries causes atrophy and finally destruction of the liver cells of the central portion of each lobule. With this atrophic destruction, we have combined in this case fibroid induration, that is, cirrhosis. What effect does this atrophy have on liver function? In proportion to the degree of atrophy—and in many cases it involves the half of every lobule—we have less liver cells to secrete bile. The effect of this condition on general nutrition you can readily picture.—*College and Clinical Record.*

Treatment of Disease of the Heart.

IN cardiac affections, modern therapeutics has begun to employ three new medicaments: bromide of potassium, iodide of potassium and hydrate of chloral.

I. According to Binz and See, bromide of potassium has a direct action upon the heart and peripheral circulation, so much so, that it should be classed among the cardiovascular rather than among the nervine remedies.

According to Gubler, bromide of potassium exercises a very remarkable sedative influence over organic disease of the heart; it causes intermission of its action to disappear, and brings down the pulsations from 108 to 78.

Prof. Dujardin-Beaumetz places bromide of potassium among the heart-tonics, and places it in the first line, immediately after digitalis: "Bromide of potassium," he says, "regulates the circulation, and has sedative qualities with relation to the cerebro-spinal axis and particularly upon the medulla oblongata. It is very superior to opium, which increases the already too great congestion of the encephalon; it regulates the pulsation of the heart, diminishes the nervous irritability, so frequent among subjects of cardiac diseases, and may thus combat the insomnia which enfeebles and exhausts the patients."

"We employ the bromide of potassium," says See. "1. As a moderator of the peripheral circulation, especially in cardiac affections which are accompanied with diminution of the arterial pressure, increase of the venous pressure, accession and irregularity of the beating of the heart, passive congestion, oedema, cyanosis and dyspnœa. 2. As a depressor of the reflex excitability. 3. As a hypnotic."

II. The second medicament recently employed with much success is the iodide of potassium. In his book on "Diseases of the Heart," published last year, Prof. See says of iodide of potassium, that it is not only the best agent with which to combat the asthma, but also that it is the most useful remedy in dyspnœa of cardiac origin. By preference he employs it in alterations of the structure of the heart itself rather than in valvular lesions.

III. Chloral hydrate is also frequently employed in cardiac affections. First of all, it slows the contractions of the organ, and then diminishes its energy; such is the re-

searches of Liebreicht, Demarquay, Rokitansky, Troquart, See, and others. Chloral acts by paralyzing, so to speak, either the intrinsic *automotor* ganglia of the heart, or the bulbar vaso-motor center.

The researches of Vulpian, Claude Bernard, Rejewski, Owjanikow, Heindenhein and Rokitansky demonstrate that chloral hydrate has a paralyzing action upon the vaso-motor nervous center, which leads to a dilatation of the peripheral vessels with diminution of the blood-pressure. Thus, following the action of chloral, reflex influences are incapable of exciting the vaso-motor center.

In seven patients affected with diseases of the heart, treated this year at his clinic, Prof. Renzi has employed these remedies, and from an attentive examination of these patients, he has been enabled to draw the following conclusions:

First. That bromide of potassium diminishes the anxiety of patients affected with cardiac affections; the experience of a certain sensation of "well-being," and respiration more easy. Under its influence sleep is more tranquil, more easy and of longer duration; there is likewise a return of physiological sleep, which appears to be the most constant, most advantageous effect of bromide of potassium. The number of cardiac pulsations and of inspirations diminish; the decrease of the latter, to the present time at least, is the noticeable. The cough alone seems to be aggravated under the influence of this remedy.

Second. The iodide of potassium succeeds best and is most useful in cardiac diseases. Its principal effect is to ameliorate the respiration in a remarkable manner, and especially to cause the symptomatic asthma to cease.

Third. Chloral hydrate, in small doses, may be used against the insomnia which torments cases of heart trouble. In general, however, it does not diminish dyspnoea of cardiac origin. It facilitates cerebral torpor, somnolence, phenomena which are not rare in disease of the heart. It is very often necessary to suspend the administration of chloral, because, given with iodide of potassium, it produces a grave and persistent somnolence in these patients.—*L'Union Medicale du Canada.*

Disease Germs.

Prof. Doremus said that at the request of the President he had the honor to perform a few experiments, which would demonstrate how readily gas passes through porous media. He had been instructed in this by that distinguished man, the late Prof. John W. Draper, about forty years ago. In 1867, at his last interview with Prof. Liebig, that gentleman had said to him: "Don't leave Munich without visiting Voit and Pettenkofer's laboratory," and he saw there what he proceeded to demonstrate.

On the table was a block of brown sandstone, twelve by fifteen inches long, and four and three-fourths in thickness. On each side of this, a depression, a quarter of an inch in depth, had been made. Iron plates had been inserted in them, and attached by clamps. To each iron plate an iron tube was fixed. The whole surface of the stone, except that covered by the iron, had been coated with many layers of varnish. Prof. Doremus, by means of a flexible tube, connected the gas pipe with the iron tube attached to the iron plate upon one side of the stone. After waiting a minute or two, he applied a lighted taper to the end of the other tube connecting with the sandstone on the other side, and a small flame sprang up, showing that the gas had passed through the solid stone. Prof. Doremus then took a block of brickwork, eight inches in thickness, made of Philadelphia brick, with plates and tubes attached in the same manner as to the sandstone. By blowing through one of the tubes, a candle-light, placed at the end of the other, was deflected; and this deflection lasted for some time after the blowing had ceased, showing that it took some time for the air to go through the brick. Blowing still harder, the light was extinguished. Prof. Doremus added, that hydrogen or street gas could be passed through stone in the same way, and that the pressure necessary to accomplish it was very small.

The next experiment was for the purpose of demonstrating the permeability of porous substances by gas, and the fourth experiment illustrated the fact that gas will pass through porous substances, notwithstanding it is opposed by the pressure of a whole atmosphere. What had been proven to be true of the gases used in the above experiments was true of sewer gas and illuminating gas. What

steps, then, must be taken to protect ourselves from their evil influence? Water-traps were inefficacious, for the gases would pass through the water and out into our houses. The only way was to kneel at the shrine of chemistry, and to make use of such substances as would decompose these poisonous gases. At Bellevue Hospital permanganate of potassium had been used for this purpose. Labarraque's solution, or the chloride of zinc, could also be used. Exposing the water and gas in our sewers to such agents destroyed all poisonous germs. Every emanation from our bodies, with few exceptions, is a compound of hydrogen, and there is not one of them that can not be destroyed by chlorine, bromine, or some such substance.

Suppose a case of scarlet fever occurring and resulting in the impregnation of the walls of the house with the poison. Bromine or chlorine, both of which readily volatilize, may be used to destroy the poisonous germs. In 1865, the ship "Atlanta" arrived in New York with a number of cholera patients on board. Sixty of her passengers had already died. The "Atlanta" and all other vessels entering the Narrows were treated with chlorine, bromine, and other similar agents, and with the result of stamping out the disease entirely.

Dr. Agnew had informed the speaker that about thirty years ago the north wing of the old New York Hospital became so foul from the reception of a large number of ship-fever patients as to be unfit for use. Ventilation was tried, but in vain. Three workmen, engaged in scraping the walls, sickened and died. At the Lincoln County Hospital, England, the walls became magazines of disease in the same way. They were gutted and replastered, but doing no good, they were torn down to the very foundation. Some years ago certain surgical wards in Bellevue Hospital became so infected that many patients died of pyæmia. At the request of the Commissioners of Charity and Correction, Prof. Doremus attempted to purify them by the use of chlorine gas. The enormous amount of three tons of this gas was generated in these wards, and though many weeks were necessary for its accomplishment, the result was very satisfactory. Dr. James R. Wood had stated that since then no cases of pyæmia had occurred. Every few months now the chlorine treatment, though in a less rigorous form, is resorted to. He thought

he was warranted in saying that, owing to the porous character of all walls and the decomposing power of certain gases, we can purify the most stately edifice if we would adopt the heroic chemical treatment.

Prof. Doremus said he spoke upon this occasion with a good deal of feeling and earnestness. On the 1st of last December he was to have delivered a lecture, illustrated by experiments, in which his son, fourteen years old, was to have assisted. The day before, that son died from the evil effects of sewer gas. Another son was just now recovering from the effects of an illness due to the same cause. He would have rather given his son the deadliest poison in his laboratory, and have trusted to the antidotes, than to have had him inhale this sewer gas, for the deadly effects of which we have no remedy.

Dr. Willard Parker said we had all known, he thought, of the fearful destruction of life in the wards of certain hospitals after they had become old and the walls saturated with disease. We had supposed fumigation and whitewashing would remove the cause of disease, but had now been informed that this kind of treatment was of little or no avail. He would never forget the condition of things in Bellevue Hospital in 1846, when its wards contained so many patients of ship fever. He had never seen any disease which he really dreaded except ship fever. At the time referred to the wards were filled to their utmost, and Dr. Riess was house physician. Going through the wards in the morning they would pick up a dozen or more that had died during the night. It was supposed that the patients were crowded too much. Beds were laid upon the floor, but the death rate continued very large. The subject then came up before the Medical Board, and it was decided that, as no more patients could be accommodated in the wards of the hospital, tents should be erected in the yard under the trees. The result was that nearly all the patients placed in tents recovered.

Many of those present may remember the vessel *Phœbe*, which was driven upon the shore at Perth Amboy in 1847. Many patients with typhus fever were on board. A large number of deaths had already occurred; but the ship went ashore, and the patients were taken out and placed upon the ground, under the trees, and in hastily improvised canvas tents, or stalls; not one of the eighty-four

thus placed died. These instances only showed the great importance of having the right kind of air to breathe.

Previous to the introduction of Croton water into New York in 1846, he did not remember of having seen a case of diphtheria. We had cases of croup, or membranous croup, as it was then called. Occasionally we met with a case of sore throat which was diphtheritic in character, the tonsils being enlarged and covered with a little whitish membrane. Diphtheria was the result of sewer malaria. There were none of us who had been in practice many years but could recall instances where the disease had occurred in families and swept away several members, and apparently without any cause. "Suppose, sir, Mr. President," the speaker asked, "there was a vault containing dead bodies near your house, would you be willing to have a tube connecting your bedroom with it? Yet this is practically what we do with our sewers. I say, sir, that whenever diphtheria occurs there is something wrong with sewerage. Now, if I were going to build a house, I would not have it connected in any way with the sewer. I would have old-fashioned bowls and pitchers upon my washstands. Back of the house I would have constructed a sort of annex, where I should have all the sewers, closets, and all the pipes of the house. This matter demands our most earnest attention. New York, in this respect, is in a very critical and unhealthy condition, and the time has arrived for energetic action."

OBSERVATIONS ON THE DIGESTIVE FERMENTS.—If properly prepared, malt extracts are rich in diastase, and have a high power in digesting starchy matters. But you will be surprised to learn, as I was, that a large proportion of the malt extracts of commerce have no action on starch. This is owing to a high temperature having been used in their preparation. Any heat above 150° Fahr. is destructive to diastase in solution, so that if the extract be evaporated, as is directed by the German Pharmacopœia, at a temperature of 212° Fahr., it is necessarily inert on starch. Out of fourteen trade samples of malt extract examined by Messrs. Dunston and Dimmock, *only three* possessed the power of acting on starch. These brands were MALTINE, Corbyn, Stacey & Co.'s Extract and Kepler's Malt Extract.—*Wm. Roberts, M. D., F. R. S., in British Medical Journal.*

MICROSCOPY.

The Phenomena of Growth Among the Microscopic Forms of Life.*

I do not come before you this evening to discuss any of the problems which lead us beyond the pale of direct observation into the realms of speculative thought. Although our subject carries us to the dim border-land of life—where it is not only impossible to distinguish plants from animals, but where even the transition from the inanimate to the living, the inorganic to the organic, is imperceptible—yet I will not ask you to follow me in any presumptuous efforts to bridge, even in imagination, the narrow chasm which separates the one from the other. It will suffice for our purpose to know that the smallest particle of matter that the microscope can reveal—and others even too small to be defined by the best microscopes known, smaller than the length of an undulation of light, may possess all the attributes of life. We know that such particles live, because they move and grow and multiply. They possess, therefore, a certain organization which distinguishes them from non-living matter. However, the use of the word organization, in this connection, has occasionally given rise to misconceptions, for none of the simplest forms of life are organized in the sense of having muscles, nerves, vessels, or any differentiation of parts for special functions. Thus, we may find a simple spherical mass of jelly, absolutely without a trace of visible structure, manifesting all the phenomena of life. Therefore, organization, in this sense, does not mean visible structure, but it relates to the arrangement of the atoms and molecules which compose the living matter.

A brief reference to the minute animal known as the amœba will serve as an introduction to the subject before us. The amœba consists principally of a transparent, clear, or granular mass of irregular shape, ranging in size from $\frac{1}{70}$ down to $\frac{1}{3000}$ of an inch, or even smaller, resembling jelly, which is known as bioplasm, or protoplasm—the physical basis of life. Within the protoplasmic mass a

*Address of the retiring President of the New York Microscopical Society, delivered at the Annual Reception, Friday evening, February 3, 1882.

more dense, circular structure is sometimes found, which is termed the nucleus, the special function of which is still a matter of investigation. The external layer of the protoplasm is somewhat more dense than the rest, but it does not constitute a distinct membrane or cell-wall, such as we find in more highly developed organisms.

If we conceive of the amœba enclosed within a membrane giving a spherical shape to the organism, we have the idea of a true cell, which is regarded as the life-unit in both the great kingdoms. It is by the assimilative powers of cells that growth takes place, and by their division all structural development proceeds. A typical cell consists of protoplasm and nucleus within a membrane known as the cell-wall. However, the life of the cell resides in the bioplasm. It is the semi-fluid contents and the nucleus of the cell that lives—all the rest is dead matter. It seems absurd, then, to regard the limiting membrane, the cell-wall, as an essential element in the ultimate life-unit. Even in cell-multiplication by the ordinary process of division, the wall takes no part, for within the parent cell it is the protoplasm that divides into two or more parts, beginning with the nucleus. A constriction forms in a certain plane, and new cell-walls are secreted by the two masses of living matter. As the cells increase in size the original membrane must give way or disappear. But it may still be said that the physiological unit of life is the cell; for, although naked bioplasm may live, assimilate food and grow, no differentiation of parts can result until there is some product, a secretion, a cell-wall or limiting membrane, to give form and structure to the primal elements of growth.

The living jelly, so readily studied in the amœba, seems to be identical with the protoplasm of every animal and plant from the highest and most complex down to the lowest and simplest.

Let us, therefore, examine this protoplasm more carefully. As the amœba moves, one portion of the body is projected forward, and the less dense protoplasm within begins to flow in the direction of the projection, like so much water, carrying with it the spherical granules which are usually abundant in the body.

The amœba has no mouth, but when a digestible morsel is found the body simply flows around and envelops it, and the process of assimilation immediately begins; the

indigestible portions are allowed to escape from any part of the surface of the body. Hence, it appears that protoplasm has the power of assimilating solid food and converting it into living matter, which is the process of growth. When the amœba attains a certain size, a constriction forms across the body, or gradually deepens until the animal becomes divided into two parts, which finally separate and move away as independent individuals.

This simple process of propagation is typical of what takes place throughout the living world. Among the simplest forms of life it serves for the multiplication of individuals, but as we ascend the scale the process of reproduction becomes more complex, and division of the constituent cells becomes a process of growth rather than of reproduction. We may, indeed, regard the human body as an assemblage of units, each of which multiplies by division, like the simple amœba, and thus contributes to the repair of waste in the tissues. The process begins in the germinal cell, and by its continuance the complex organs of the body are evolved, according to some inscrutable law. The reproductive process of the amœba, therefore, typifies the growth of higher organisms; for the first considerable advance in structural evolution is in the production of a more complex organism by the division of cells, the progeny of which, instead of separating from the parent-cells as new individuals, remain as integral and inter-dependent parts of one organism, each cell, or group of cells, having specific functions in the economy of the animal or plant.

Among the green, confervoid algæ of ponds and ditches are found many plants which consist of a series of cells attached end to end, forming filaments. These plants are termed multicellular, to distinguish them from the unicellular species, and they are classed higher in the scale of organization. But complexity of structure, as thus manifested, is not, so far as my judgment permits me to observe, an indication of a higher stage of cell-life; for each cell of the filaments is complete and independent of all the others. There is no physiological bond connecting them, as in the higher plants, but each one carries on an independent existence, and is not killed if its fellows are destroyed. Between the filamentous plants and the strictly unicellular forms which consist of spherical, green cells, living separately, we find a succession of interme-

diate forms in which the cells are bound together by a more or less firm mucous, or gelatinous substance, some in layers of indefinite extent and arrangement, others in well-defined families. But however they may be related, each cell, so far at least as its merely vegetative functions are concerned, is quite independent of the others, for it possesses within itself all the powers necessary for its existence as a living organism. In other words, these plants belong to such a low stage of life, that there is no distinction between the cells such as we find in higher plants where certain cells contribute to the formation of tissues, others convey the nutrient sap, and still others produce the organs of reproduction, the pistil and stamens. It follows that in such low plants we must look for all the phenomena of growth and reproduction in each cell—each cell is, in fact, a perfect plant. Hence, no classification of these plants based upon their manner of growth, can be regarded as quite satisfactory to the scientific student. The tendency now is to base all classification upon the methods of reproduction, which, being the ultimate process in the life of every organism, characterize its mature stage and indicate the point at which its development was arrested in the course of its evolution.

Complication of structure results from cell-division, but it is necessary to observe that all cases of cell-division do not lead to structural complexity; for in the case of strictly unicellular protophytes or protozoa, the production of new cells or gemmæ, within the parent, leads to what seems to be a multicellular stage. But each new cell produced under such circumstances is, physiologically and anatomically, an independent individual, in no wise dependent upon the others for support, but capable of separate existence. Hence, the multicellular condition, when it thus occurs among the strictly unicellular organisms, is in no wise a higher condition of organization, but only a temporary phase brought about for a special end. It is only when the multiplication of cells is a phenomenon of growth and the resulting cells form constituent parts of the organism, that there is any advance in structure. This is the case in an ovum which, by repeated cell-division, produces a morula.

Carrying the ideas embodied in this view one step further, it should also be observed that while the cell, in a physiological sense, can be justly regarded as the typi-

cal unit from which all living forms are derived, as taught by the generally accepted cell-doctrine, yet the student of the lower forms of life can not fail to observe that all the structures to be found in protophytes or protozoa, as well as many found in the higher planes of existence, do not result from cell-division—that many of the appendages, such as carapaces, flagella, cilia peduncles, etc., result from processes of growth, or secretion, without cell-division.

The dictum that has so long been taught by physiologists, that all structures originate in cells, can not longer stand.

The most complex cell is a ciliated infusorian, and in these animals there are many structures which must be regarded as true secretions of the cell, not produced by cell-division, as usually taught.

(To be continued.)

Trichina-Like Parasites.

FIVE years ago we found in the lungs of the marsh toad a number of minute worms, which bore a striking resemblance to the mature trichina. The worms were all females, viviparous and pregnant. For a long time, we were almost forced to the conclusion that they were trichinæ, but finally identified them as the curious *ascaris nigro-venosa*. We take the following from the London *Lancet*, and commend it to our readers:

“To microscopists who are endeavoring to ascertain the various habitats of trichinæ, a useful word of warning has been given by M. Megnin in a paper read before the Societe de Biologie, in which he points out that many minute encysted worms are met with which are not trichinæ, although so closely resembling them as to have deceived many observers. The supposed discovery of trichinæ in the rootlets of beet-root, proved to be a mistake by Virchow and Kuhn, is a striking instance of this sort. Lagenbeck described trichinæ in the intestines of earth worms, but Kuhn showed that the parasite is quite distinct from the trichina spiralis. Merlan and Tigri thought they had found trichinæ in the lungs of a sheep, but Delpech showed that these were merely the embryos of strongylus filaria. Cobbold has stated that the trichina is

common in the hedgehog. Megnin is convinced that this is an error, and that the worms described are merely the encysted larvæ of the *spiroptera clausa*. He showed preparations of an encysted nematoid worm, which might easily be mistaken for the trichinæ, but pointed out that the former differs in having a papilla at its mouth, and the anus is not terminal. Siebold described, as a trichina, a worm found in cysts in the peritoneum of the grey lizard and other creatures, but Megnin asserts that this also is the larva of a *spiroptero* (*S. abbreviata*), the adult individuals of which are abundant in the intestines of the same animal. An encysted *spiroptera* still more strikingly resembling the trichina has been found in the muscles of the frog. Very similar, but larger, encysted worms of the same genus have also been discovered in the subcutaneous tissues of a bird—the *manchetes pugnax*.—*Medical Herald*.

GLEANINGS.

LISTERINE.—L. Ch. Boisliniere, M.D., LL.D., Professor of Obstetrics and Diseases of Women, St. Louis Medical College, and President St. Louis Obstetrical Society, says of this new antiseptic: "I have given a fair trial to Listerine. The more I use it the better I am pleased with it as an antiseptic and deodorizer. As a dressing for uterine cancer, I found that the fetor had been thoroughly corrected, and, after the removal of this morbid growth, a marked benefit could be ascribed to Listerine, as it appeared to promote healthy granulations. In offensive leucorrhœa and cervical or vaginal discharges, it removes all disagreeable smells. For vaginal douches and injections after parturition, I now use exclusively Listerine. Besides being a reliable antiseptic, its very agreeable odor should give it the preference over all other articles of this class."—*Va. Med. Monthly*.

TREATMENT OF EPITHELIOMA OF THE NECK OF THE UTERUS.—Dr. Cheron, referring to the Italian experiences with this practice, employs the nitrate of lead in ulcerating epithelioma of the uterine neck. After cleansing the surface with charpie moistened with glycerine, or washing out the canal with perchloride of iron solution if there is much oozing of blood, he applies to the ulcerated surface

with an insufflator the following powder: Plumbi nitat. purif. ʒi. Lycopdii ʒij. The powder is kept in position by a suitable tampon. Under the action of this preparation the suppuration diminishes sensibly and the odor disappears. The hemorrhages are also suppressed. After twelve or fifteen of these applications, the engorgement of the cul-de-sac diminishes, and the general health is greatly improved.

BOOK NOTICES.

DISEASES OF WOMEN: Including Their Pathology, Causation, Symptoms, Diagnosis, and Treatment. A Manual for Students and Practitioners. By Arthur W. Edis, M. D., Lond. F. R. C. P., M. R. C. S., Assistant Obstetric Physician to Middlesex Hospital, etc. With 148 Illustrations. 8vo. Pp. 576. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: Robt. Clarke & Co. Price \$4.

We have in the volume before us a new work on diseases of women. Many, no doubt, will think that there are already enough of such works, and that further works upon the subject are unnecessary. But it is only by multiplying works that we can expect progress to be made. It is those who write, who investigate and think. The physician who gives his attention exclusively to his business, and is without the stimulus of writing and instructing others, is not inclined to make extensive researches, and add to the stock of knowledge.

Students of medicine, and practitioners who, during their student career, failed to make themselves familiar with the subject of gynecology, will find this work well suited to their wants. The various topics are treated in a clear, comprehensive manner, so as to be easily understood. The author's style is plain, and the student, soon becoming interested, is surprised how at home he feels in understanding the main points in the various affections described. While the volume can be consulted by all with profit, the student especially will find it valuable and suited to his wants.

The author, while endeavoring to give an impartial account, has given considerable prominence to the mechanical treatment of displacements of the uterus. Yet it is

not his wish, as he states, to recommend too great reliance upon mechanical appliances.

The diagnosis of abdominal tumors, being generally one of much difficulty to students, is treated most exhaustively. The functional disorders, also, have been entered into at considerable length.

A copious index is appended, to facilitate reference, and every effort has been made to render the work practically useful to the student and busy practitioner. We have no doubt it will meet with a cordial reception.

A TREATISE ON HUMAN PHYSIOLOGY: Designed for the Use of Students and Practitioners of Medicine. By John C. Dalton, M. D., Professor of Physiology and Hygiene in the College of Physicians and Surgeons, New York, etc. Seventh edition. With 252 illustrations. 8vo. Pp. 722. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: R. Clarke & Co. Half-Russia, price \$7. 1882.

The work of Prof. Dalton on Physiology needs no commendation. It has been in the hands of physicians and students so long a time that its great merits are well known. This is its seventh edition, and it continues to hold a leading position among the text-books of its department. So well adapted is it to the wants of those seeking a knowledge of physiology, that it is not at all surprising that there is so great a demand for it both in this country and in England.

The work has been described a number of times in our "Book Notices," yet so many changes have been made in this edition as to make it proper to recur to some of its features. The greater part of the book has been revised and its arrangement somewhat modified. Important alterations have been made in the classification of albumenoid substances, particularly in the prominence given to the ferments as a special group. In the department of the nervous system more extended consideration has been given to the localization of function in special parts of the cerebro-spinal axis. These relate not only to the cerebral convolutions and their connection with various forms of movement and sensation, but also to the identification of special communicating tracts of white substance in the brain and spinal cord. Furthermore, the study of the vaso-motor nerves and nerve centers has re-

quired a more extended treatment than heretofore, in consequence of having reached a development which makes it almost a special department of nervous physiology.

The type, paper and presswork are excellent. Besides being bound in cloth and sheep, it can also be had, by a trifling additional cost, bound in half-Russia, which adds much to the beauty of the book, and greatly increases its durability.

MEMORANDA OF PHYSIOLOGY. By Henry Ashley, M. D.,
LOND., Physician to the General Hospital for Sick
Children, Lecturer on Animal Physiology in Owens
College. Third Edition, thoroughly Revised, with
Additions and Corrections by an American Editor.
24mo. Pp. 319. New York: Wm. Wood & Co. Cin-
cinnati: R. Clarke & Co.

This little work, of a size that easily permits it to be carried in the pocket, is certainly *multum in parvo*. It is the most complete work of the kind with which we have ever met. As small as it is, yet it seems to contain pretty much all the leading facts of physiology. It well illustrates into how small a compass a treatise can be brought, when the relation of facts and principles has been stripped of all its unnecessary verbiage. We are sure that it will be greatly sought for by medical students; and practitioners, too, will find it exceedingly convenient to look through and refresh their memories in regard to the leading points in physiology.

THE OPIUM HABIT AND ALCOHOLISM. A Treatise on the Habits of Opium and its Compounds--Alcohol, Chloral Hydrate, Chloroform, Bromide Potassium, and Cannabis Indicus. Including their Therapeutical Indications. With Suggestions for Treating Various Painful Complications. By Dr. Fred Heman Hubbard. 12mo. Pp. 259. New York: A. S. Barnes & Co. Cincinnati: R. Clarke & Co.

We have not had time to fully examine the work before us, but as the author claims to have cured many cases of "opium habit," we have no doubt, or, at least, we are willing to believe, that a good many practical hints of value can be culled from it, but surely the author is very deficient in education, for no educated physician, in writ-

ing a prescription, writes it in part in Latin and in part in English; as, for instance :

R_y. Chlorinated Lime, . . . ʒj.
Aqua, . . . ʒvi

We copy a couple of prescriptions made for a little girl, seven years of age, to whom the mother had given laudanum from the time it was born. At the time the author commenced the treatment of the case, the child was taking half an ounce of laudanum a day. The first prescription is entitled No. 1. It is as follows :

R_y. Morphia, . . . ʒiv.
Alcohol, . . . ʒx
Aqua, . . . ʒxxx. M.

Sig.—Two teaspoonfuls after meals.

The next prescription is styled No. 2, as follows :

R_y. Belladonna Tr., . . . ʒx.
Alcohol, . . . ʒix.
Ginger Tr., . . . ʒx.
Cannabis Indica, . . . ʒiv.
Gum Arabic, . . . ʒvi.
Aqua, . . . ʒxx. M.

The directions appended are, that the amount taken from No. 1 is to be replaced every third day from No. 2.

The author is in great need of lessons in prescription making, and in writing directions. His prescriptions would shame a first-course student, and, besides, he exhibits an ignorance of medicines that would make any one afraid to employ his preparations.

A SYSTEM OF SURGERY, Theoretical and Practical, in Treatises by Various Authors. Edited by T. Holmes, M. A., CANTAB., Surgeon and Lecturer on Surgery at St. George's Hospital. In Three Volumes. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: G. T. Craven & Co., 141 and 143 Race Street.

In the last number of the MEDICAL NEWS we noticed the second volume of this magnificent encyclopædia of surgery. Just as we are closing the present issue, we have received the third and last volume. We must defer its notice until our next number. It is sold only by subscription.

EDITORIAL.

DECEASE OF DR. WILLIAM T. BROWN.—It is with deep felt sorrow that we announce the decease of William Thomas Brown, of Cincinnati. Dr. B. died at his residence, on Freeman Street, in this city, Thursday, 3 o'clock P. M., January 26th. His disease is stated to have been cerebro-meningitis.

Dr. Brown was born and reared in the village of Milford, Clermont Co., O. His grandfather on his mother's side was Dr. William Williams, one of the pioneer physicians of the State, and a student of the distinguished Dr. Benj. Rush, of Philadelphia. His father, Dr. Thomas M. Brown, still living, but retired from active practice, residing at this time in Cincinnati, was a well known and highly esteemed physician of Clermont County. He was contemporary, forty-five or fifty years ago, with the father of the writer—the practices of the two adjoining, and often meeting one another in consultation.

The subject of our sketch received as liberal an education as the academy of his village, conducted by Prof. D. W. Stevens, afforded. After completing his general education, he turned his attention to the study of medicine, preliminary to entering the profession of which not a few of his family were members. During the first years of his studying medicine, he was under the tutorship of his father and grandfather, from whom he not only learned the first principles of medicine, but a great deal of experience. In order to complete his education he came to Cincinnati and commenced his studies at the Miami Medical College, which was in existence at that time, but which afterward consolidated with the Medical College of Ohio. He graduated in the spring of 1857. For some time after graduating he was one of the assistant physicians at St. John's Hotel for Invalids, at the corner of Plum and Third Streets. In 1858 he opened an office on Freeman Street near Eighth Street, where he continued to reside and practice his profession until his decease.

During the war of the Rebellion he was one of the surgeons of the United States Hospital on George Street. He joined the Academy of Medicine at an early period, but was not one of the original founders, as has been erroneously stated. He read a number of papers before it, and was one year the Secretary.

He was quite successful in the practice of his profession, securing quite a large practice. He was attached to his profession, and faithfully discharged his duties to his patients.

Dr. Brown leaves a wife and two children. He was married in the fall of 1870 to Miss Sarah Adelaide Hunting, a daughter of Mr. Hunting, of the firm of S. S. Smith & Co., at one time prominent liquor dealers in this city. One of their children, the eldest boy, died when he was two years old. His children are Fred Brown, dying since the father, and Addie Brown, both quite young. Attached as he was to his profession, he was ever devoted to his wife and children and their interests. During his last illness, when he scarcely recognized any about him, he seemed to be especially pleased with the familiar faces of his family. He was a prominent member of Kilwinning Lodge of Masons, Cincinnati Chapter, Cincinnati Council, and Cincinnati Commandery. As a Mason, he took a prominent rank, having taken the 32° of the Scottish Rite. He was also a prominent Odd Fellow, being a member of Magnolia Lodge. He was actively interested in the Associated Charities, and was one of the Finance Committee of the Twelfth District.

A meeting of the medical profession was held in the Miami Medical College, on Twelfth Street, for the purpose of taking suitable action on the death of Dr. William T. Brown.

Dr. William H. Mussey was called to the chair, and Dr. A. G. Drury was appointed Secretary.

On motion, the Chairman appointed Drs. J. L. Cleveland and C. P. Brent a committee to draft resolutions, who reported as follows:

"The members of the profession of Cincinnati, having assembled to-day to manifest their esteem for their late associate, Dr. Wm. Thomas Brown, who has been removed from them by the hand of death; your committee would report, that in his death we have lost a member who for nearly twenty-five years has held an enviable position among us. As a physician he was faithful in an eminent degree to his patrons, strictly honorable in his intercourse with his colleagues, and deeply interested in the advancement of the science of medicine. As a citizen he was patriotic and zealous in the advocacy of the interests of the community. To the poor he was a sincere friend and benefactor. As an associate we have to mourn the loss of a true friend, one whose example may well be imitated.

"Resolved, That the proceedings of this meeting be published in the daily papers and medical journals of this city, and a copy sent to the family of the deceased."

The Chair stated that Drs. Carson and W. H. Taylor, the

physicians in consultation with Dr. A. M. Brown, brother of the deceased, were present, and asked them for a history of the late illness of Dr. Brown.

Dr. Carson said the attack was similar to one the deceased had had five years ago, but was more pronounced in every respect. Before taking his bed he had given evidence of being broken down; had sacral and sciatic pains, but had recovered somewhat and returned to business. He had lately been much harassed by professional cares, and had lost sleep. The diagnosis was cerebral meningitis. There had been general hyperæsthesia and exaltation of the senses. Soon after the beginning of the attack, delirium set in, and was continuous, with slight intervals, until death. Hallucinations were varied in character, many of them about matters connected with his professional business. Early in the attack bed sores manifested themselves. On Friday before death, he seemed to be better, and for a short time consciousness returned and he recognized those about him. From the following day he rapidly failed until his death.

Dr. E. Williams said he believed he was one of Dr. Brown's oldest friends. He had known him as a student and practitioner for twenty-five years. If there ever was a man unselfish in his devotion to his patients he believed Dr. Brown was that man. For many years Dr. Brown had believed that he had been poisoned during some professional operation, and with this belief had consulted the speaker, and though assured by the latter such was not the case, it had nevertheless disturbed his peace of mind ever afterward.

Dr. Mussey had known Dr. Brown's grandfather and father. Both were physicians. The deceased had probably inherited the characteristics necessary to make a good physician. At one time Dr. Brown had assisted him as Demonstrator of Anatomy in the Dental College. Subsequently he occupied Dr. Mussey's office while the latter was in the army, but the demands of a rapidly increasing practice compelled him to give it up. At the time of his former illness, the speaker had advised him to give up practice for a year and go abroad. This advice he did not heed. He died before his time, from overwork. He was straightforward and honorable in all things, true to himself and his profession.

Dr. Ludlow spoke very feelingly of his religious and

professional character. It was one worthy of imitation.

Remarks were also made by a number of others present, but we have not space to report them.

The following resolutions, prepared by a committee consisting of Thad. A. Reamy, J. Trush and J. L. Cleveland, were adopted by the Cincinnati Obstetrical Society:

"WHEREAS, Death has removed from our midst Dr. William T. Brown, one of the most honored of our number, a charter member of this Society, marked alike for his high moral integrity, social and professional character, a distinguished physician; therefore, be it

"Resolved, That we deeply deplore the untimely death of our brother, cut off in the prime of life, at the age of manhood's greatest vigor.

"Resolved, That we fondly cherish his memory, and seek to emulate his virtues.

"Resolved, That a copy of these resolutions be furnished to the bereaved family, and that they be published in the daily papers and the medical journals of the city."

At a regular meeting of Cincinnati Medical Society, the following resolutions were adopted:

"While we bow with submission to the will of an all-wise Providence in taking from our midst our beloved brother, Dr. Wm. T. Brown, we must express our sorrow for his loss, our admiration for his character, and our thankfulness for the example of his life; therefore

"Resolved, That in the death of Dr. W. T. Brown each one of us has lost a warm personal friend; that this Society has lost an honorable, active and earnest member; that the medical profession has lost a member who was ever ready and able to uphold its purity and honor, and to extend its benefits with equal cheerfulness to poor and rich; that the community in which he lived has lost a citizen who was always fearless in support of the right, and whose hand never withheld what duty or charity demanded.

"Resolved, That we extend our sympathy to the members of his family, who are mourning the loss of a husband, father, son and brother, the depth of whose tender affection could not be sounded.

"Resolved, That a copy of these resolutions be sent to his family, and that they be published in the daily papers and medical journals of the city.

"WILLIAM JUDKINS,

"T. H. KEARNEY,

"W. H. McREYNOLDS,

"Committee."

ACTION OF THE MIAMI ALUMNI.

The Alumni Association of Miami Medical College held a meeting at the College Building, to take action on the death of their former ex-President, Dr. William T. Brown.

A large number of gentlemen were present, among whom were some of our most prominent physicians in the city, many of whom had been warm, personal friends of Dr. Brown.

Dr. C. P. Brent, President, in the chair; Dr. W. H. Falls, Secretary.

Dr. Brent having stated the object of the meeting in

some well-chosen remarks, the following gentlemen were appointed to draft appropriate resolutions: Drs. Stanton, William B. Davis and L. A. Shepard.

Remarks, very highly eulogistic to the memory of the deceased, were made by Drs. Brent, Bigney, C. P. Judkins, L. A. Shepard, William Judkins and Professor William B. Davis.

Each gentleman spoke of the high regard and esteem with which Dr. Brown was held, not only by physicians, but people at large; of his self-sacrificing duty to his patients, and the high and noble example he had left after a life of such great usefulness, and which was so worthy of emulation.

The Committee on Resolutions presented the following, which were adopted:

"It seldom falls to our lot to mourn the loss of a man whose death leaves such a chasm in our Society as does that of our brother, Dr. William T. Brown. He entered the Miami Medical College in 1854, and in 1857 took the degree of M. D. at the age of twenty-one years. While a student in College he sustained the character of a most devoted and enthusiastic student of medicine, and enjoyed the respect of all his classmates.

"After graduation he remained one year in the St. John's Hospital as one of the resident physicians, on leaving which he engaged in the practice of his profession in this city, where, by his assiduous attention to professional duties, together with his good judgment, he was soon introduced to a general practice, which was limited only by his inability to attend to it, if further increased. The faithful discharge of the duties incumbent on the physician, and his close application to study laid the foundation for the disease which cut him off at the time when he should have been at the meridian of his usefulness.

"In all the relations of life he was most exemplary. As a man he was affable and courteous, ardent and faithful in his friendship. As a physician he stood high with all who knew him. Not satisfied with distinction in a single department of medicine, but soaring far above mediocrity in all. He was a strong enemy of quackery, with which he held no terms, under whatever garb it presented itself. A wife and two children remain, to mingle their tears together, as they realize the greatness of their loss, and to them we tender the condolence and sympathy of this Association.

"*Resolved*, That in the death of Dr. Brown the Alumni Association of Miami Medical College has lost one of its most honorable members, the community one of its most accomplished and successful physicians, and the medical profession one of its most beloved and distinguished members.

"*Resolved*, That while deploring his loss we will emulate his virtues, and enshrine his memory in our hearts.

"*Resolved*, That a copy of these preambles and resolutions be sent to the family of the deceased, and another furnished the press for publication.

Dr. Bigney was authorized to procure a floral tribute as an offering from the Society to the memory of their deceased friend and brother.

MEDICAL COLLEGES.—In a letter published in a recent issue of the *Boston Med. and Surg. Jour.*, Dr. Oliver Wendell Holmes writes: "A school which depends for its existence upon the number of its students can not be expected to commit suicide in order to satisfy an ideal demand for perfection. Any institution which is essentially dependent on the number of paying students it can draw must be tempted to sacrifice its higher aims to popularity. No high standard can be reached under such circumstances, and the only way to insure the independent action of a school which aims at teaching the whole country by example, is to endow its professorships, so that the very best and highest grade of instruction, and not that which is popular because it is easy and superficial, may always be given from its chairs, whether the classes be large or small. A small number of thoroughly accomplished medical graduates, their knowledge based on sound scientific acquirements, and made practical by assiduous clinical observation and teaching, will be worth more to the country than twice or thrice the number of half-taught, hastily-taught practitioners. A series of such classes will, in the course of a single generation, elevate the whole professional standard, as they go forth, year after year, missionaries in the cause of health.

"The Old World motto is *noblesse oblige*. Our generous men of wealth are changing the phrase to *richesse oblige*, and thus becoming recognized as our untitled nobility. It is only necessary to show them in what way their beneficence will do the most extended and the most lasting good. The founding of five or six professorships will carry the names of their founders down to a remote posterity, and call them to honored remembrance when the stately buildings around us are replaced by other and still nobler structures."

These sentiments of Prof. Holmes we have urged in the main, so frequently in the *MEDICAL NEWS*, and pressed them with so much emphasis, that the members of the various faculties in the neighborhood seem to have lost their kindly interest for us; but as a watchman upon the wall, whose duty it is to give notice of approaching danger, we have felt it incumbent upon us to expose all shams and tricks, and exhibit to the light all measures that tended to degrade the profession. Time and again

have we produced evidence of a student's having been permitted to graduate by one of the regular medical schools of Cincinnati who had studied medicine less than two years. Again, we have cited instances, that have come under our observation, where students have received credit for attendance upon two courses of lectures, and graduated, when, in fact, they had attended only about six weeks of each of two terms of lectures—twelve weeks altogether. We have also made known the fact that, of a class of a hundred candidates or more for graduation, there had not been a single failure of passing, when, according to the experience of every medical educator, that there should not be a single incompetent person among so great a number of candidates, is absurd to suppose. Mr. Buckle, in his *History of Civilization*, has shown conclusively that, in a given society, the relative proportions of persons of peculiar characteristics are always the same; *i. e.*, in communities, the good and bad, the educated and uneducated, infidels and believers, exist together in an invariable proportion. When, therefore, a college claims that, of a hundred candidates for graduation, every one is qualified, when other medical schools reject ten or more per cent., it can be set down that the claim is not valid, to say the least.

In exposing this laxity of the schools in our vicinity,* we have assigned as cause of it the fact that these colleges depend solely for their support upon the fees obtained from students, and, consequently, they are under the necessity, to a greater or less extent, of catering to students. If an individual presents himself to attend lectures, he must be accepted, as a student, however ignorant he may be, however unqualified he may be, in all respects, for such a profession as that of medicine, or the college treasury will suffer loss. If there should be a failure in paying expenses, if a student is refused, the members of the faculty must make up from their private resources whatever amount would have been received from the rejected individual in fees, if he had not been rejected. It will thus be perceived that for a medical

* We have no doubt there is as great laxity in the medical colleges of other cities as in those of Cincinnati. Our criticisms have applied to them more than to others, simply because they have been more under our observation. We have more than once mentioned the delinquencies of colleges in distant cities.

college to refuse students from any cause, as, for instance, want of preliminary education, etc., is to lessen its means of existence—an act toward suicide; and, if ventured upon, it must be done with the greatest care, or suicide out and out will be the result.

We have frequently insisted in our editorials that the fee demanded for diploma—usually \$25 or \$30—is really a bribe to the faculty to graduate a student, whether qualified or not. We have urged that, if a student has faithfully fulfilled all the requirements for graduation, and passed a satisfactory examination, graduation is justly due him; and to demand a large fee for it is an outrage. Under present regulations, the candidate for graduation pays into the treasury \$25 or \$30 a month or six weeks previous to the final examination. To reject him will be to deplete the treasury to the amount of \$25 or \$30. Is there not the very strongest temptation to let the money quietly rest where it has been placed, especially if the college greatly needs it? and where is there a medical school, however large may be its classes, that is not greatly in need of money? We have never been so fortunate as to find one yet.

But not to lengthen out our article to too great an extent. We have no doubt, but that time will eventually prove that the only way by which the medical colleges of this country can be improved and brought to a high standard will be to endow them and make them independent of students' fees. Medical instructors, then, will be paid salaries, like other instructors, which they ought to be paid, and not be under the necessity of laboring for mythical glory. "The laborer is worthy of his hire;" and a physician, like other men, when he spends time and labor for the benefit of others, should have a recompense in money, the medium which is able to secure for him a living and its enjoyments—comforts of mind as well as body. Honor and glory are very well in their place, but they are poor things to live on—they will not bring a single crust of bread when hungry.

The Harvard Medical School is the only medical school in the United States that has set itself on the right course to bring about a real elevation of the profession, so far as a medical school is concerned in its elevation. The *Boston Advertiser* thus announces its aims, which are worthy the emulation of all the other medical colleges; and we

hope that it will receive such a patronage as to compel imitation:

It has established a preliminary examination for admission into the school, thus excluding the ignorant and wholly untrained young men who would begin the arduous studies of a medical course without the knowledge and mental discipline which are necessary to fit them to profit by such instruction as is given in a medical school like that of our university. It has organized a regularly systematic and progressive course of instruction, in place of the mixed courses which have long been tolerated in spite of the general conviction and confession of their unphilosophical character and unsatisfactory unpractical results. It has multiplied its courses of instruction so as to include the various important specialties which have developed of late years into separate professional branches. It has secured the co-operation of numerous clinical teachers in different public institutions, so that many of the advantages of the great foreign hospitals can be obtained without going abroad to find them; it attempts to establish a regular course of four years for all its students; it is building a new and more suitable home for the school; it hopes to retain its present home for clinical purposes; it desires to attract a larger number of students, and it wishes to reduce their expenses; it entertains the honorable and laudable ambition of being the foremost medical school in the country; and it proposes to make such further advance in the thoroughness and completeness of the instruction it can supply, that it will be no longer necessary for the medical graduate of the United States to continue and supplement his studies in foreign lands. All this can be accomplished by the endowment of professorships and by increasing the permanent fund of the school.

TONGA FREE TO SCIENCE! Messrs. Allen & Hanburys, of London, brought suit against Parke, Davis & Co., for alleged infringement of their rights in their use of the word Tonga. We learn that they have received the following service from their attorney:

"DETROIT, MICHIGAN, *January 20th, 1882.*

"MESSRS. PARKE, DAVIS & CO.

"*Gentlemen:*--In the case of Hanburys *vs.* Parke, Davis & Co., the complainants, on their own motion, obtained an order of court to dismiss bill of complaint with costs to be defrayed by themselves.

"This order was obtained after the defense had established by the testimony of Dr. Frank E. Stewart and of Charles Rice, both of New York, that the word Tonga had long been known, and had long ago been applied both to natural products and to medicinal preparations. It was thereby shown, that the claims of complainants, that they had invented the word Tonga, and first applied it to medicinal preparations, had no foundation in fact whatever."

The absurdity of the claims of the complainants, as to their ownership in this word, is fully established by their action in withdrawing the case and assuming costs thereof before the defendants had completed the taking of evidence on their side of the case.

In this contest, the house of Parke, Davis & Co. have been fighting single handed against the nostrum venders,

who have been constantly invading the province of the scientific physician. The nostrum trade, for some time, have been endeavoring to monopolize all preparations and medicines adapted to the cure of chronic diseases, and make all discoveries in materia medica and pharmacy pay tribute to them. But in this recent suit, which was brought against one of the leading pharmaceutical houses of the country, they have suffered a signal defeat.

Tonga is a compound of barks prepared by the natives of the Fiji Islands, and has borne in that locality for years the reputation of being an effective remedy in the treatment of neuralgia. A quantity thereof was brought, as alleged, to London in the year 1879 by one Mr. Ryder, who placed the same in the hands of Allen & Hanburys, druggists, London, in order that it might be introduced properly to the medical profession. The first information relative thereto which was published to the public or to the medical profession appeared in the shape of an article in the London *Lancet*, March 6, 1880, pp. 360, 361, March 20, 1880, p. 445, as a communication from the pens of the distinguished physiologists and therapeutists of London, Drs. Wm. Murrell and Sidney Ringer. Following this article were others of a similar nature in the *Lancet*, and one appearing in the London *Pharmaceutical Journal and Transactions*, April, 1880, from the pen of the distinguished curator of the Pharmaceutical Museum of London, Dr. Holmes, upon the subject of the "Botanical Origin of Tonga." Believing that Drs. Murrell and Ringer, from their high professional position, would never have investigated or published the results of their investigations of any drug in the London *Lancet*, without it was free from any contaminations of a proprietary nature, Parke, Davis & Co. felt no hesitancy in assuming that Tonga was common property, and accessible to the reach of any house of sufficient enterprise to seek the drug in its original habitat. Acting on this supposition they dispatched a special representative to the Fiji Islands, 7,000 miles southwest from San Francisco. He remained in the Fiji Islands six months, which visit resulted in the final delivery to them, at Detroit, in the month of December, 1880, of a large supply of this new drug. In accordance with their usual custom, they at once published what reliable information they had with reference to the medical properties of this drug, and distributed ample quantities to individual practi-

tioners as well as the public hospitals of the United States for trial, at the same time occupying a large amount of expensive advertising space in the various medical journals of America. As a result of this action a demand was rapidly created for Tonga, which attracted the notice of Allen & Hanburys, who commenced suit in this country through their agents, Messrs. Schieffelin & Co., of New York, on the ground that they had a proprietary interest in the name of "Tonga," than which nothing could be more absurd; for, as we understand it, "Tonga" is the name given the plant by the inhabitants of Fiji, and consequently no one can hold an ownership of that name. It was undoubtedly an effort on the part of a drug establishment, to make a nostrum of a new discovery in materia medica and to levy a tax on legitimate practice, but Messrs. Parke, Davis & Co. nipped it in the bud.

WE are in receipt of a pamphlet on the PREPARATORY EDUCATION OF MEDICAL STUDENTS by Prof. Traill Green, M. D., LL. D., of Lafayette College, Easton, Pa. The subject is treated in the able and interesting manner characteristic of the author. He shows conclusively the necessity of greater mental training, than is usually the case, on the part of young men, proposing to enter the profession, preparatory to beginning the study of medicine. He quotes the president of Harvard University, who says: "It is notorious that the medical students have been, as a rule, a rougher class of young men, than other professional students of similar age. In this University, until the reformation of the school in 1870-71, the medical students were notoriously inferior in learning, manners, and discipline to the students in other departments; they are now indistinguishable from other students. A corresponding change in the medical profession, at large would be effected in twenty years, if all the important medical schools of the country should institute a reasonable examination for admission."

President Elliott is also quoted as saying that an American physician "may be, and often is, a coarse and uncultivated person, devoid of intellectual interest outside of his calling, and quite unable either to speak or write his mother tongue with accuracy."

It is a fact, observed too often to be gainsayed, that an individual, without previous mental training, will under-

take the study of medicine at a great disadvantage, if it is his design to do so. A very rude box will be made by one who has not first learned the use of tools; and very poorly will medicine be learned by an individual, who has not first learned how to learn. The person whose mind has been disciplined to study, grasps the principles of a new study with a facility that can not be approached by one whose intellectual powers have not been trained to study. Our observation has shown us that a young man, who has received a collegiate education, will learn more in a given time, though he plays half of his time, than another young man, who studies all his time, notwithstanding he may have more natural ability, but has no advantages of education. The reason is that the former is skilled in study, and knows how to study, while the latter does not. Prof. Green once asked a French teacher how much time he gave to French in the classical course. He replied! "One term." "A classical student will learn as much in one term, as students who have not studied the ancient languages will learn in three terms." Dr. Luther Holden, in his recent Hunterian Oration, says, as quoted by Prof. Green, "that in students who have had a public school training (classical), I have found a fuller development of the logical faculty, a more cultivated memory, a greater grasp and power of combination. I have found the task of teaching them so much easier, that I have no hesitation in saying that I can teach such pupils more in two months, than others, who have had no like education, in six.

At no distant day, we hope that all the medical colleges, in order to hold a respectable position in the profession, will be under the necessity to require all who propose to attend upon their instructions, to give evidence of possessing a certain amount of education that will be, at least, a little more than a common school education.

THE meeting of the Alumni Association, of the Ohio Medical College, will be held in the College building WEDNESDAY, March 1, at 2 P. M. Address by Geo. B. Evens, M. D. on the "Relation of Insanity to Modern Society."

C. S. MUSCROFT, M. D., Secretary.

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ORIGINAL CONTRIBUTIONS.

Other Symptoms of Neurasthenia (Nervous Exhaustion).

BY GEO. M. BEARD, M. D., OF NEW YORK.

IN a paper read before the New York Academy of Medicine, and published in the *Virginia Medical Monthly* for June, 1878, I described certain symptoms of Neurasthenia (nervous exhaustion) as follows:

Tenderness of the scalp (cerebral irritation, cerebras-thenia); tenderness of the spine (spinal irritation, myelas-thenia); tenderness of the teeth and gums; tenderness of the whole body (general hyperæsthesia); general or local itching; abnormalities of the secretions; vague pains and flying neuralgias; flushing and fidgetiness; tremulous and variable pulse with palpitation; sudden giving way of general or special functions; special idiosyncrasies in regard to food, medicine, and external irritants; sensitive-ness to changes in the weather; a feeling of profound ex-haustion unaccompanied by pain; ticklishness; desire for stimulants and narcotics; insomnia; nervous dyspepsia; partial failure of memory; deficient mental control; sem-inal emissions; spermatorrhea; partial or complete impo-tence; changes in the expression of the eyes and counte-nance; mental depression, with general timidity; morbid fear of special kinds, as agoraphobia (fear of places); astraphobia (fear of lightning); sick headache and various forms of headache; disturbances of the nerves and organs of special sense; localized peripheral numbness and

hyperæsthesia; general and local chills and flashes of heat; local spasms of muscles.

The above list is not only not exhaustive, but a number of the phenomena embraced under the various heads have been described thus far but incompletely.

I purpose, in the present essay, to supplement the clinical picture of this very frequent and little studied nervous disease by analyzing somewhat more in detail some of the symptoms already noticed, and by describing others that, so far as I know, have not been previously described, at least, not in their relation to neurasthenia.

Some of the above symptoms, when they are mentioned at all in works on diseases of the nervous system, have been and now are referred to under such headings as cerebral anæmia, or hyperæmia, or general anæmia, or hysteria, or hypochondriasis, or oxaluria; and some of them are mentioned in connection with structural lesions, as ataxy and muscular atrophy, and by many are regarded as essential parts of the clinical image of these grave disorders.

DEFICIENT THIRST AND CAPACITY FOR ASSIMILATING FLUIDS.

Quite recently a physican who consulted me in regard to himself, called my attention to the highly interesting fact that he rarely drank water either at meals or between meals; and he stated that the average quantity of liquid that he consumed was far below the normal standard. Investigation of other cases of neurasthenia has convinced me that this deficiency of thirst is one of the symptoms of that state, and it would appear that it is not an unusual symptom, but exists in not a few cases; there are many who for years have a poor appetite for fluids as they have a poor appetite for solid food; they live on a small quantity of liquid, and, perhaps, without suspecting it until their attention is directed to the fact. There are those who find that if they take much liquid the stomach suffers even when little or no solid food is mingled with it. One advantage, with some disadvantages, of the free use of beer with our German friends is in the quantity of fluid that they thereby imbibe—the water of the drink more than the alcohol. Drinking milk has a similar advantage.

When we remember that the body is composed mostly of water, we can easily see that there is a danger of starving for want of simple liquid, just as under the influences of our civilization, we are starving for want of fatty food.

There is no question that the Europeans, who are far less nervous than the Americans, use far more liquid nourishment; and it is also a fact, more and more impressed on my mind, that many neurasthenic patients are very temperate, if not total abstainers, and some abstain even from tea and coffee.

ABNORMAL DRYNESS OF THE SKIN, JOINTS AND MUCOUS MEMBRANES.

In some cases of neurasthenia the skin of the whole body is unnaturally dry; this is especially and most readily noticed in the hands, but all parts of the surface may present this peculiarity. A scaliness or scurfiness may accompany this dryness, as though there were a deficiency of fluids and of sebaceous secretion. There would also appear to be a relation between this condition and a disinclination to drink, or use fluids freely.

A young lady of twenty-one, in addition to many other neurasthenic symptoms, had dryness of the scalp, eyes and ears, especially in the morning; her eyes and ears, would be dry and hot, and in the ears a thin skin would form, and fine scales would be thrown off. These symptoms were not constant; they would leave entirely for a number of days, and then, without any apparent cause, return—thus following the law of all other symptoms of neurasthenia.

Dryness of the joints is also observed in the nervously exhausted. How the joints may suffer in grave spinal diseases, such as ataxy, is well known; but in these functional maladies of which neurasthenia is a type, the joints may suffer, though in a less severe manner. Deficiency of the secretion, with dryness and cracking sound on movement, I have noticed in a number of cases; in one striking case of musician's cramp, cracking of the joints is noticed in the affected fingers.

SWEATING HANDS, WITH REDNESS.

Sweating of the hands—of the palmar surface, or of the entire hand—palmar hyperidrosis—is a symptom of neurasthenia at once so interesting and so frequent, that I wonder that the literature of the subject is so meager.

Very frequently indeed this symptom is one of the results and accompaniments of sexual debility, especially when caused by masturbation; but it can hardly be re-

garded as diagnostic of sexual exhaustion, nor would I, on the fact alone, decide that the genital system was primarily at fault. This phenomenon—abnormal perspiration of the hands—is certainly more common in males than in females, although it occurs, as, indeed, all forms of hyperidrosis occur, in both sexes. The milder phases are common enough, but there are severe manifestations that this symptom may assume, which seem well nigh beyond belief. Thus a young man now under my care is so distressed thereby that he threatens suicide unless he is permanently cured. In his case there are various evidences of a bad inheritance, a poor constitution, although this palmar sweating is just now the only very annoying expression of the depraved diathesis. A young lady in the northern part of the State is compelled to take a number of handkerchiefs with her when she goes to school, and on her return they are all saturated from the excessive perspiration of her hands. My friend, Dr. Josiah Roberts of this city, tells me that in a similar case, lately brought to his attention, there was clear proof of uterine disease.

The intimate relation of this symptom to the nervous system is shown in many striking facts. Thus one young man who consulted me would be attacked periodically—at ten and four o'clock—and whenever he was at sea the symptom would utterly leave him. In one of my cases the slightest emotion would instantly saturate the hands as thoroughly as dipping them into a pail of water. The effort to shake hands is sufficient to produce this effect. Redness of the whole hand—erythema—sometimes attends this palmar sweating, and in one of my cases the ears are as red as the hands.

CONVULSIVE MOVEMENTS, ESPECIALLY ON GOING TO SLEEP.

Nervous sufferers, just as they are dropping off to sleep, are sometimes suddenly and painfully awakened by a violent, spasmodic movement of an arm, or leg, or of the whole body. This appears without any warning, and is most likely to occur when preceded by unusual excitement or fatigue. In some cases there will be a recurrence of these spasms, so that much difficulty is experienced in getting to sleep. I have known instances where the whole body seemed to be thrown off the bed, or rather, the sensation was as though the body were projected upward. This symptom is not so alarming as some of those

who experience it believe. It indicates an exhausted, a worn condition of the nervous system; but it is not as ominous for evil as many other phenomena that belong to the nervously exhausted state. A friend of mine—a public speaker, constantly before audiences, and always at work—with a frame of unusual size and an extraordinary capacity for enduring mental excitement and toil—tells me that with all his vigor he has been annoyed by these jerkings on falling to sleep, although he has no other evidence of neurasthenia.

It is probable that these convulsive symptoms on dropping to sleep are the effect and sign of congestion in the exhausted nerve centers, and occur while passing out of the waking into the sleeping condition, because the inhibitory or controlling power of the waking state is removed.

ATONIC VOICE.

When neurasthenia lays its hands on a man it is liable to leave its impress on every organ and function of the body; from the crown to the toe there is not a fiber that is safe from attack. If some parts escape in one individual, they suffer in others. If at one stage of the malady certain regions are unaffected, it may be only that they may be attacked with all the greater violence at another stage. Thus the hair, the scalp, the eyes, the ears, the nasal and respiratory passages; the brain, in whole or in part, the cranial nerves, the heart, the spinal cord in any portion, the sensory and motor nerves, the stomach and bowels, the reproductive system, the skin, the nails, the secretions, the excretions, the absorbents—all are objects of assault.

It is not strange, therefore, that there should be a neurasthenic voice, just as there is a neurasthenic eye, a neurasthenic stomach and genitals. The chief peculiarity of the neurasthenic voice, is softness, faintness, want of courage and clearness of tone. These terms, through vague, express perhaps, as well as it is possible to do in words, how this voice deviates from the normal voice, but at best verbal descriptions are faulty, and far inferior to even a single living illustration. To a physician accustomed to see these cases and to observe the voice, there is but little difficulty in at least suspecting the diagnosis by this symptom alone. This neurasthenic voice some-

what resembles the peculiar voice of the deaf; and yet it is not precisely like that, and can usually be distinguished from it. A neurasthenic sufferer may have the muscle of an athlete, and be so strong that a hard day's toil is but play, and yet speak in a voice which in quality and volume of sound suggests the beginning of convalescence from a severe fever.

"The voice," says Emerson, "is a delicate index of the soul," and with scientific truth the same philosopher asserts, that the orator can often tell by the quality of his own speech, at the beginning of an oration, or sermon, whether he is or not in the mood of speaking, whether he is to be eloquent or utterly fail.

A dissolute life, especially in women, always registers itself in the voice, impressing a coarseness that in its quality is almost diagnostic. The queens of song are never grossly impure.

OXALATES AND URATES IN THE URINE.

The relation of oxalate of lime to various nervous symptoms was long ago pointed out by Golding Bird, and the importance of examining the urine for the deposits of the oxalates was strenuously insisted on by him; but the true relation of such deposits to the nervous system seems not to have been fully understood either by him or by those who have since written on the subject.

As a matter of routine, I have, for years, been accustomed to have the urine of my neurasthenic patients examined, and in the majority of cases it is found that the oxalates, and in some cases, the urates, are in great excess. Amorphous urate deposits are noticed, also uric acid crystals.

The term "oxaluria," so often applied to this condition, is quite analagous to the term "spinal irritation," as applied to tenderness of the cord with accompanying symptoms, so often observed in neurasthenia. To the employment of such terms there can be no objection, provided those who use them understand that in scientific strictness they do not mean disease of a distinct character, but are really results and expressions of neurasthenia, malnutrition of the nervous system. The urine of the neurasthenic is often, if not usually, abnormally acid; and spermatozoa are frequently found even where there is no special reason on the part of the patient, or of the

physician, to suspect any marked degree of seminal weakness. In a philosophic sense these oxalates and urates, and the acidity and spermatozoa, are like spinal irritation, cerebral irritation, neurasthenia, asthenopia, and dyspepsia, results, effects, in a word, symptoms, and if the cause at all of other symptoms, are but secondarily so.

GAPING AND YAWNING.

As evidences of temporary fatigue, gaping and yawning are familiar enough even though their physiology may be obscure. In organic disease of the brain also, frequent and prolonged gaping has been noticed.

In one case of glosso-labial paralysis that I saw a number of years ago, this symptom of gaping was so frequent, and the act so prolonged, as to be ludicrous.

In neurasthenia, gaping, yawning and stretching may appear like the other symptoms mentioned, and like them also the attacks come and go; they are quite apt to follow overexertion or excitement, even when there has been no loss of sleep. A neurasthenic patient, now under my care, tells me that after long reading a newspaper in the morning after breakfast, he is troubled with gaping, though no other evidence of weariness annoys him; in his case the eyes are asthenopic, and prolonged use sometimes brings on various symptoms.

DILATED PUPILS.

Dilatation of the pupils is so often seen in neurasthenia, especially in the sexual forms, that it may be considered as an important fact to be noted in the study of a case. I do not look upon this symptom as in any sense diagnostic, although it is so often associated with a history of genital disturbance, for there are cases of sexual exhaustion where it does not exist, and it sometimes exists where there are no proofs of sexual trouble.

Abnormal activity of the pupil—sudden and frequent alternations between contraction and dilatation—is a sign of neurasthenia, or, at least, of nervous irritability, of perhaps more importance than mere dilatation, just as in organic diseases of the cord, sluggishness of the pupils, slowness to contraction or dilate, has been recently suggested as a better diagnostic sign than mere contraction of one or both pupils.

SHOOTING PAINS SIMULATING THOSE OF ATAXY.

If there be any difference between the familiar shooting, lightning-like pains in the extremities that have so long been considered as peculiar to ataxy, and the shooting pains of neurasthenia, I have not been able as yet to find it out. Generally these neurasthenic pains are milder than those of ataxy, but this average fact does not interfere with the fact of observation, that this difference in degree is not of itself sufficient to make it possible to establish the differential diagnosis; for the shooting pains of ataxy are by no means always severe, and in many cases of the disease do not exist at all. The mistake of writers in so strenuously insisting on the diagnostic importance of these shooting pains, has been, and is, the source of terrible annoyance to physicians, especially who happen to be themselves sufferers from these neurasthenic symptoms.

The same remark applies to fibrillary contractions, which have been looked upon as indicating muscular atrophy, but which, as I have elsewhere stated, may consist of one of the many symptoms of neurasthenia.

PECULIARITIES OF PAIN IN THE BACK.

In neurasthenia all parts of the back may be the seat of pain, although certain districts are more affected than others. There may be tenderness when there is no pain, and conversely pain, even severe pain, when there is no tenderness. There may be much distress in the loins and over the hips, when careful examination shows no tenderness anywhere.

This pain in the hips and loins is something quite different from ordinary neuralgia or sciatica; it rather resembles muscular rheumatism or a common cold, and is indeed often confounded with one or both of these diseases even by able diagnosticians. The liability to confound irritation of the upper part of the spine at the nape of the neck with rheumatism is very great; the symptoms, indeed, are quite the same—pain, stiffness, aching, inability to move the head without discomfort. Sometimes this condition perfectly simulates wry neck, and is mistaken for it. One of the very ablest neurologists in Germany, on being consulted by a case of irritation in the upper part of the spine, made diagnosis of rheumatism,

and treated the patient accordingly. This back pain, and the tenderness that may or may not accompany it, fluctuates like all these neurasthenic symptoms; to-day they are present in full force, to-morrow they are all gone, but, on any provocation, are liable to return. They fly about in every direction; now just below the shoulder blade; now in the center of the spine; and at another time between the shoulder blades, or in the middle lumbar region; sometimes with heat and burning, at others with biting, penetrating sensations, or a feeling as though ants were crawling just under the skin.

HEAVINESS OF THE LOINS AND LIMBS.

One of the most frequent complaints among the neurasthenic (myelasthenic form) is heaviness and vague aching of the loins and limbs, and sometimes of the whole body. This is a symptom hard to define in exact words, but it is very common, and it is a cause of great distress. This symptom is quite apt to follow over physical exertion, as in walking or standing, but may come on without any apparent or special exciting cause. This feeling so closely resembles rheumatism that it is often confounded with that affection by those who are unfamiliar with neurasthenia, and even one well acquainted with nervous exhaustion in all its forms, might, on first being called to a patient, mistake this heaviness and aching for a common cold, or for a rheumatic attack.* I have lately been consulted by a gentleman suffering from myelasthenia, where this aching of the lower part of the back and loins are almost the only subjective symptoms. In sexual exhaustion, pains in the loins and limbs, not amounting to neuralgia, but sufficient to be a severe annoyance, are frequent enough, but they are not restricted to the sexual variety of neurasthenia.

VARIETIES OF MORBID FEAR (PHOBIA).

There would seem to be almost no limit to the phases that morbid fear may assume in the nervously exhausted. These varieties of diseased apprehension have been observed for years, not only in the positively insane, but in the so-called hypochondriacal and melancholic; but they have not been regarded as worthy of careful scrutiny and

* How the symptoms of ataxy have been, and are, mistaken for rheumatism is well known to the physician.

analysis; the patients who complain of them have been dismissed, as merely imaginary, and the many accompanying symptoms which, when thoroughly studied, would have shed much light on the condition that gives rise to these morbid fears, have likewise been passed by.

Recently, however, science has endeavored to bring these vague phenomena into the realm of systematic observation, analyzing their minute manifestations, showing their relations and dependencies, and giving them, in certain cases where their frequency and positiveness would warrant, distinct names; thus astraphobia—fear of lightning—was described by me some years since; agoraphobia—fear of places—has been described by Westphal, of Berlin; and, still more recently, I have applied the term anthrophobia—fear of society—to that morbid apprehension of going into company, or of encountering human beings in any relation, which is so often seen in the nervously exhausted, especially in those sexually exhausted. One of the many phases of anthrophobia is inability to look in the face of one with whom we are conversing; this is seen frequently in sexual exhaustion, as all students of that form of nervous disease know; but it is no more restricted to that type alone than are any of the other symptoms that have been cited. Indeed, any form of exhaustion may give rise to any form of morbid fear, although, so far as I can judge from my own observation, sexual trouble—masturbation and excess—is at least one of the prominent factors in the majority of cases.

The general philosophy of this morbid fear in the neurasthenic (cerebrasthia) would appear to be that the debility of the brain—the nerve impoverishment—renders it impossible to meet responsibility, just as paraplegia makes it difficult or impossible to walk; morbid fear is indeed but a psychical paralysis, but of a functional rather than of an organic nature.

The world over, aversion of the eyes with a turning away of the face, is an expression of the emotion of humility and bashfulness, that is, of a feeling of weakness as compared with the person in whose presence we stand—an instinctive and involuntary recognition of the fact that, for the moment, our force is inferior to his. In neurasthenia this same principle appears as a pathological symptom—an expression of debility, of inadequacy, of

incompetence. This aversion of the eyes is so constant a symptom in these neurasthenic patients, that I often make the diagnosis as soon as they enter the office, before a word has been spoken by either party, and even before the patient has had time to be seated. I have now under my care a young man with sexual exhaustion, who is so badly anthropobic, that even when I take his head in my hands and hold it up, it is impossible to keep his eyes fixed on mine for more than an instant. A very intelligent and able friend, now under my professional care, displays this same characteristic, and I have often talked with him in regard to it.

Some of the phases of this morbid fear are very interesting and surprising, even to those who are most familiar with the caprices of the diseased nervous system. I have elsewhere published a brief account of the physician who consulted me in regard to himself for long-standing cerebrasthenia, one of the symptoms of which was inability to go away from his home or office, or place where he was stopping, to any considerable distance in a direct line. He had the muscular strength to walk twenty miles, but when summoned to a patient was often obliged to decline to attempt to go even half a mile, which was a great astonishment to his patients, who were well aware that even when unable to visit them he could work all day in his garden. Like many of these cases he had a morbid fear of visiting the place where he was first attacked by any of his ill feelings; thus he had been at one time prostrated in New York City, and felt incompetent to come here to consult me; accordingly, I met him by appointment in a distant city. In walking out with him one morning, I observed that he continually turned off to the side streets, so as to keep at a little distance from the hotel where we were stopping for the day, and, on my questioning him, he said that he could not go more than half a mile in a straight line, and that therefore he turned into the side streets so as to keep the hotel near at hand. The result was that we walked arm in arm, circumnavigating the hotel at a moderate distance, although not always keeping it in sight. The patient was not at all wearied, although the walk was a long one—in a direct line perhaps a mile or two.

I have now under care a patient whose morbid fear takes just the opposite phase: he can not go to a certain

locality, but can go very near to it, and beyond that point his own will is often powerless to urge him forward. He was first attacked while in a lithographic establishment working at his trade, and from that hour he has found it hard or actually impossible to enter any building devoted to that business. One day he resolved that he would conquer what seemed to him and his friends a foolish whim, and started out for the shop, but on arriving in sight—about the distance of a block—he was compelled to stop; a cordon of policemen could not have been a more effective blockade; resolved not to be beaten, he retired a short distance, and approached the building from another direction, but was again brought up against the imaginary barrier, and so in succession all the points of the compass were tried with absolute failure.

He had a chance to work in Syracuse, and went to the depot to take the train for that city, but on entering the station and going up to the office, he burst into tears, and could not buy his ticket; he tried and tried, and finally gave up and returned home. He could have walked to Syracuse, but he could not reach out his hand and purchase the ticket for his fare. At another time he succeeded in reaching Cincinnati in quest of employment, and was directed to a lithographic establishment where he expected to be employed; but in spite of all his repeated trials he could only come within sight of the building, and he was forced to return to New York.

I have just been consulted by a physician who, as one of the effects and signs of cerebrasthenia, can not at times undertake any slight responsibility; thus he has sometimes allowed a large number of horse-cars to pass him before he could bring up the resolution to jump on board one of them; and yet his muscular strength at the time was excellent.

Inability to travel alone is one of the myriad forms of morbid fear, and is indeed quite the opposite of anthropobia, just described. During the past year two cases of this kind have been under my observation—one a clergyman, the other a merchant, and both competent to attend to their respective duties: the first as teacher in a responsible position, the second as partner in a mercantile house; although both suffer, and, for years, have suffered from very many other symptoms of neurasthenia.

HOPELESSNESS.

When a patient is dying in the last stages of consumption or cancer, he is often, if not usually, hopeful; and sometimes he does not abandon the expectation of recovery even when on the edge of the grave. After friends have given up utterly, and the physician only comes to relieve, the patient himself is full of hope.

In functional nervous disorders, that are relievable if not curable, the reverse phenomenon is observed. The patient, even in the earlier and milder stages, is without hope, while the friends laugh at his fears and ridicule him for talking or thinking of his symptoms. A good example is found in an attack of sick headache, but nearly all the neuroses exhibit this phenomenon, in greater or less degree; as, for instance, writer's cramp, hay fever, musician's cramp, telegrapher's cramp, and the malady here under consideration, neurasthenia, in its various phases.

In organic, structural and incurable disease, such as cerebral paralysis, paraplegia, etc., the sufferer is far less likely to despair of relief.

The philosophy of this symptom of hopelessness appears to be similar to that of morbid fear, as above described. That is, an instinctive consciousness of inadequacy for the task before us. We are hopeless because our nerve force is so reduced that the mere holding on to life seems to be a burden too heavy for us. A certain amount of nerve strength is necessary to supply the courage requisite for simple existence. Abstaining from dying demands a degree of force, just as the mere keeping in an erect position—standing up without taking a single step—is only possible to those who have a certain quantity of strength. Abstaining from dying, like abstaining from falling, is in one respect a negation only, but neither is possible without an expenditure of force.

The despair of sea-sickness well illustrates this phenomenon. In the short space of an hour, or less, one can be reduced from a state of perfect bliss to perfect misery, simply from the perturbations caused by the motion of the vessel.

One time, when returning from England, our steamer collided with a sailing vessel in such a way and under such circumstances as to give just reason for the belief that we might be in serious peril. In the height of the

excitement and alarm a sea-sick passenger came out from his room, where he had been shut up ever since our departure, and inquired what the trouble was all about. He was informed that our steamer was leaking and that we were fast sinking. "If that's all, I'll turn in again," he replied, and went back to his berth, whence he did not emerge until we all landed in New York.

In some cases of neurasthenia this hopelessness is intermittent, periodic, like attacks of inebriety or neuralgia, and these attacks are quite independent of all external conditions, although they may be excited and modified more or less by the environment.

PECULIARITIES OF INSOMNIA.

The different phases of insomnia in neurasthenic patients are exceedingly interesting.

One man finds no difficulty in getting to sleep on retiring, but soon wakes and must remain awake for the rest of the night. Another man rolls and tumbles for hours before he falls into oblivious slumber, but when once asleep does not usually wake until morning. I was recently consulted for a case of insomnia of many years' duration, where there had never been any difficulty in sleeping after getting to sleep.

Other sufferers report that they sleep in fragments—oases of repose in a desert of dreary wakefulness—but bad dreams constantly harass them so that in the morning they are less rested than they should be. Why a bad dream should be a bad symptom is not quite clear. Why a man disturbed by indigestion or exhausted nervously by excitement late in the evening, should dream of snakes and monsters instead of green fields and gardens, of death and murder instead of delightful society and experiences, has perhaps only this general explanation, that the normal action of the cerebral cells is designed to be, in the main, pleasurable, and that mental, like physical pain, is a symptom of something abnormal. It is also a question how far dreams are pathological. It would seem that in perfect health—if there be such a state—one might dream even unpleasantly; and yet there is no doubt that savages, and farmers, and, in general, those who live out-doors, depending on their muscles for their subsistence, dream far less than the in-door brain-workers. My guide in the woods of Maine and Northern New Hampshire,

tells me that he very rarely dreams, and one cool, phlegmatic man, whom I met in that region last summer, assured me again and again that he never, in all his life, had a dream that he could recall; and with that class, as a rule, dreams of any kind, good or bad, are exceptional.

Some neurasthenic patients can only sleep by night—never by day, however wearied. Others can sleep by day; often fall to sleep when they especially desire to keep awake, but at night toss in painful activity.

Physical exercise also acts very capriciously with different persons. Thus one of my patients tells me that if he takes a long walk in the evening, he is more restless than usual that night; and yet he is a very strong man, capable of much physical and mental toil.

APPEARANCE OF YOUTH.

Persons afflicted with neurasthenia, very often, and I think in the majority of cases, where the condition is constitutional and long-standing, look younger than their years; they bear the weight of time more easily than the phlegmatic and the strong; and when between, say thirty-five and forty-five, will pass for five or ten years below their actual age. I have reached this generalization not hastily, but after much observation and reflection. Constantly I find myself astonished when a new patient, whom I have never before seen, tells me his age. I observe that those who have had a long battle with their morbid feelings, who have been perhaps disabled, crippled, or exiled by nervous incapacity, look ten years younger than their vigorous friends. The neurasthenic are, as a rule, less wrinkled and worn; they have less fat and muscle that furnish the materials for flabbiness and coarseness of feature. Their skins are thinner and softer, and show the blood more readily. They are also less likely to be attacked with those degenerative changes in the blood-vessels and the skin, that are the signs and results of age. In a word, they look young for the same reason that they live long.

There is a still wider generalization that can be verified—namely, that the nervousness that attends civilization is everywhere accompanied by this appearance of youth. The higher classes look younger than their years, the lower classes look older than their years. Some time since,

when I was connected with the Nervous Department of Demilt Dispensary, New York, I noticed that the majority of the patients looked from five to ten years older than they were. This was true of both sexes, and in nearly all forms of nervous disease. Those between twenty and thirty appeared to be thirty-five or more, and only repeated questioning in some cases would convince me that there was not either ignorance or deception. But scarcely any of those patients were neurasthenic, for in that class neurasthenic and allied affections are very rare.

SELECTIONS.

Digestion—Indigestion.

BY E. N. CHAPMAN, A. M., M. D.,
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INDIGESTION in its broader signification embraces a large number of symptoms—dignified as diseases—attendant upon morbid action of the intestinal tube and its glands, those seated in its mucous coat and those pouring their secretions into its cavity. To treat these symptoms wisely, and bring order out of disorder, it is necessary to fully understand the physiological laws impressed upon the organs which prepare the food for absorption, and furnish the blood with the materials for its constant renewal. These laws, as fixed as those presiding over inorganic matter, will, if regarded, promote health and comfort, but will, if disregarded, induce disease and suffering. Their steady neglect always results, sooner or later, in functional disease of the stomach, bowels and digestive glands, and eventually in disorder of the whole economy. The casual light infringements of physiological laws are readily atoned for, as the natural powers promptly assert their supremacy and correct the evil; but when these have been continuous and reckless, there is no reprieve except by a long and strict obedience to dietetic and hygienic rules. No medication alone, however skillfully directed and faithfully followed, will be of avail. If drugs be needed, they must be used with a due regard to the normal functions, and calculated to assist in their restoration. Still, the main

agencies by which to restore the normal functions are food, air, exercise, sunlight and environment. These being secured and aided, when requisite, by proper remedies, there is no reason why a complete recovery can not be attained in all the varied forms of indigestion, inasmuch as by this course of procedure the causes of disease are removed. To success, it is essential to prescribe a diet that will impose little labor upon the digestive organs, and will at the same time offer all the elements of nutrition to the blood.

It has been supposed that food is digested in the stomach: 1st, by coction or elixation; 2d, by putrefaction; 3d, by trituration; 4th, by fermentation; and, 5th, by chemical solution. The first theory is that of Hippocrates, the last, that of Spallanzani, who first discovered the solvent action of the fluid secreted by the stomach. To this fluid he gave the name gastric juice.

The experiments of Beaumont on St. Martin, between the years 1824 and 1833, gave a new impulse to the chemical theory and seemed to prove that the gastric juice is the chief, if not the only, agent in process of digestion. Its action he regarded as "purely chemical," one reducing all the varied ingesta to a homogeneous pulp, the chyme. He says, "I can see no more objection in accounting for the change effected on the food, on the supposition of a chemical process, than I do in accounting for the varied and diversified modifications of matter, which are operated upon in the same way."

The chemical theory was, after it had sway for many years, displaced by the older one, that of fermentation. The discovery of pepsin, a ferment body, seemed to settle the matter. And yet, from the insufficiency of this theory, as well as of all other theories, to account satisfactorily for the digestive process, one may even at this late day exclaim with Dr. Wm. Hunter: "Some physiologists will have it that the stomach is a mill; others that it is a fermenting vat; others again that it is a stewpan; but, in my view of the matter, it is neither a mill, a fermenting vat, nor a stewpan—but a stomach, gentlemen, a stomach!"

The more recent studies of physiologists have shown that the gastric juice does not combine with the food chemically; but, being mixed with it mechanically, induces by its presence certain changes, and then is reabsorbed into the circulation. The process is more akin to

catalysis than fermentation, the catalytic body being the pepsin. The food is dissolved and reduced to a uniform mass; and yet starch, sugar and oil pass into the duodenum unmodified. Even meat, albumen, casein and gluten are not perfectly digested in the stomach; they are merely broken up, liquified and transformed into peptoms which have chemical relations different from the original nitrogenized substances. In the case of meat, the areolar tissue is dissolved, and the fibers disintegrated into a pultaceous mass. Still, under the microscope, the characteristic muscular striae are readily detected.

The cell walls of fat, starch, and other vegetable aliments are dissolved and their contents set free. The action of the gastric juice is not dissimilar to that which takes place in the case of albuminoids. When all the varied contents of the stomach reach the duodenum, the great work of digestion is continued and completed, as far as the intestinal tube is concerned, by the action of the duodenal, pancreatic and hepatic secretions. The action of each has not been well defined, but this much is certain, the chief part of digestion is performed in the duodenum by the aid of the secretions formed in its mucous coat, or poured into its cavity.

Notwithstanding these well established facts in physiology, physicians all over the world are to-day prescribing pepsin as though all food was fully digested in the stomach, and nothing more was needed when the stomach flagged than to give it extraneous aid. If, according to Dalton, it requires thirteen pints of gastric juice in the case of a dog to digest a pound of meat, and if, as he states, fifteen per cent. of this juice is pepsin, it would take an enormous amount of this substance as a medicine to supply a patient for a day. Were this quantity given, nothing but albuminoid substances and cellular, fibrous tissues would be acted upon, and no provision would be made for the dissolved nitrogenized matter, starch, sugar and fat as they pass into the duodenum. The difficulty could not be met by the simultaneous use of pancreatine, as, at this point of its progress, the food requires the duodenal and hepatic secretions as well as the pancreatic to complete the digestion and prepare the chyme for absorption.

Inasmuch as casein is more completely digested in the stomach than any other albuminoid, it will be conceded,

I think, that a baby confined to the breast and having healthy passages excepting a fine admixture of curd, ought to be particularly benefited by the use of pepsin. A number of years since, being impressed with the reasonableness of this theory of digestion, I faithfully tried the best pepsins in the market—domestic and foreign, acid and neutral—without attaining the least advantage. The curd appeared in greater quantity and in larger pieces than before. With this experience I abandoned its use altogether, and directed my attention to the causes that interfered with the digestion.

The thousand and one changes on pepsin, and on pepsin and pancreatine, having been rung, and still the attainment not being equal to the promise, then attention was turned to prepared foods and those partly digested. Now, certainly, as all the elements of nutrition are in a concentrated form, and need but slight changes in the stomach and duodenum to prepare them for absorption, the patient can not fail to be nourished.

More recently it has been claimed that medicine has now attained such precision as to render it possible on a chemical basis to decide when to give and when to withhold any particular food or drug. To make muscle, fat, nerve, etc., is a simple matter. The poor consumptives have had a large experience in this plan of treatment. To their sorrow they have found themselves, not infrequently, wasting away day by day on a rich diet and free doses of cod-liver oil. This while, the state of the gastro-duodenal mucous membrane had been disregarded or assumed to have the average healthy condition. That this is not so, except in rare instances, is a matter of common observation. Indeed, disease of the lung may arise from a fault in digestion and assimilation and be hurried forward by over-crowding the stomach.

The observations of Beaumont throw a flood of light upon the varying condition of the gastric mucous membrane and its secretions.

“The inner coat of the stomach, in its natural and healthy state, is of a light or pale pink color, varying in its hues according to its full or empty state. It is of a soft, or velvet-like appearance, and is constantly covered with a thin, transparent, viscid mucus, lining the whole interior of the organ.” When the stomach is empty “the rugæ appear irregularly folded upon each other, almost

in a quiescent state, of a pale pink color, with a surface merely lubricated with mucus." When food is taken "the action of the vessels is increased, the color heightened; even the vermicular motions are excited. The small vascular papillæ begin to discharge a clear, transparent fluid, which continues abundantly to accumulate, as aliment is received for digestion."

In morbid conditions "the villous coat becomes somewhat red and dry; at other times, pale and moist, and loses its smooth and healthy appearance; the secretions become vitiated, greatly diminished, or entirely suppressed; the mucous coat scarcely perceptible; the follicles flat and flaccid, with secretion insufficient to protect the vascular and nervous papillæ from irritation."

"There are sometimes found on the internal coat of the stomach, eruptions, or deep red pimples; not numerous, but distributed here and there, upon the villous membrane, rising above the surface of the mucous coat. These are at first sharp, pointed and red; but frequently become filled with white, purulent matter. At other times, irregular, circumscribed, red patches, varying in size or extent, from half an inch to an inch and a half in circumference, are found on the internal coat. These appear to be the effect of congestion in the minute bloodvessels of the stomach. There are also seen at times, small aphthous crusts, in connection with these red patches. Abrasions of the lining membrane, like the rolling up of the mucous coat into small shreds or strings, leaving the papillæ bare for an indefinite space, is not an uncommon appearance."

One of the experiments of Beaumont on St. Martin shows how profoundly the stomach is impressed by indigestible, irritating articles. Several of these secured by silk strings were introduced into the stomach through the fistulous opening at 12 M. During the afternoon there was "considerable distress and uneasiness at the stomach, general debility and lassitude, with some pain in his head." The secretion of the stomach was "rancid and sharp."

The next morning, "the distress at the stomach and pain in the head continuing, accompanied with costiveness, a depressed pulse, dry skin, coated tongue, and numerous white spots, or pustules, resembling coagulated lymph, spread over the inner surface of the stomach, I thought it advisable to give medicine; and, accordingly, dropped into the stomach, through the aperture, half a

dozen *calomel pills*, four or five grains each; which, in about three hours, had a thorough cathartic effect, and removed all the foregoing symptoms and diseased appearances of the inner coat of the stomach."

St. Martin, after eating irregularly and drinking immoderately for several days, said he felt well and relished his food, and yet Beaumont found that erythematous and aphthous patches had appeared on the lining membrane of the stomach, and that the gastric juice had become much vitiated.

There was no material change the day following the examination, but the second day "inner membrane of the stomach unusually morbid—the erythematous appearance more extensive, and spots more livid than usual; from the surface of which exuded small drops of grumous blood—the aphthous patches larger and more numerous—the mucous covering thicker than common, and the gastric secretions much more vitiated. The gastric fluids extracted this morning were mixed with a large proportion of thick ropy mucus and considerable muco-purulent matter, slightly tinged with blood, resembling the discharge from the bowels in some cases of chronic dysentery. Notwithstanding this diseased appearance of the stomach, no very essential aberration of its functions was manifested. St. Martin complains of no symptoms indicating any general derangement of the system, except an uneasy sensation and a tenderness at the pit of the stomach, and some vertigo, with dimness and yellowness of vision, on stooping down and rising again—has a thin, yellowish brown coat on his tongue, and his countenance is rather sallow, pulse uniform and regular; appetite good; rests quietly and sleeps as well as usual."

In four days, during which he had been "confined to low diet, and simple, diluent drinks," and "not been allowed to taste of any stimulating liquors, or to indulge in excesses of any kind, the coats of the stomach were as clear and healthy as usual."

Beaumont remarks, "Diseased appearances, similar to those mentioned above, have frequently presented themselves in the course of my experiments and examinations. They have generally, but not always, succeeded to some appreciable cause. Improper indulgence in eating and drinking has been the most common precursor of these diseased conditions of the coats of the stomach. The free

use of ardent spirits, wine, beer, or any intoxicating liquor, when continued for some days, has invariably produced these morbid changes. Eating voraciously, or to excess; swallowing food coarsely masticated, or too fast; the introduction of solid pieces of meat, suspended by cords, into the stomach; or of muslin bags of aliment, secured in the same way, almost invariably produced similar effects, if repeated a number of times in close succession. * * *

“It is interesting to observe to what extent the stomach, perhaps the most important organ of the *animal* system, may become diseased without manifesting any external symptoms of such disease. In the case of the subject of these experiments, inflammation certainly does exist to a considerable extent, even in an *apparent* state of health—greater than could have been believed to comport with the due operations of the gastric functions.”

From these observations of Beaumont upon a healthy subject and under favorable conditions, it is quite certain that the mucous coat of the stomach is very prone to be inflamed by dietetic abuse, and its secretions checked and perverted; and, also, that the mere act of abstinence is usually sufficient to subdue the inflammation and restore a free and healthy secretion of the gastric juice. When St. Martin persisted in an injurious course of eating and drinking, the morbid condition became, more and more, aggravated until, at last, the digestive process was no longer possible. Under such circumstances, it would have been folly in Beaumont to have attempted, by artificial means, to force the digestion, as is now the habit of so many practitioners the world over.

From the promptness with which the inflammation subsided in St. Martin's case, when the stomach was left at rest, it is apparent that the mucous membrane was not actually inflamed like ordinary tissues of the body, but only assumed that appearance through an intense physiological congestion. In other words, the gastric mucous membrane is an erectile tissue, and is, by the influence of the ganglionic nerves, subjected to periods of great nervous and vascular action. This, in the normal state, is followed by involution; but in the abnormal, the congestion remains, and is intensified by continuous irritation.

From the number, amount, and importance of the secretions discharged into the duodenal cavity, it seems,

a priori, that the activity going on in the nervous and vascular systems of the glands engaged in this part of the digestive act, must be equal to that of the gastric glands, and that the congestion of the duodenal mucous membrane must be equal to, if not greater than, the gastric. Indeed, in my experience, the duodenum is involved more frequently and profoundly than the stomach. This, necessarily, would be the case, as here the final intestinal changes on all articles of food are effected.

The various secretions holding nutritive materials in solution are taken up by the venous radicals, and carried into the portal veins. Their average sum total in a day is something enormous—saliva, 3 pounds; gastric juice, 14 pounds; bile, $2\frac{1}{2}$ pounds; and pancreatic juice, $\frac{1}{3}$ of a pound. This quantity, increased by the fluids drunk, is carried forward to the liver. To me, it seems highly probable that the several secretions, thus united, may still act as catalytic bodies and further perfect the work begun in the stomach and duodenum. At least the digestive process is renewed with great vigor in the liver, which becomes the seat of nervous and vascular activity. Thence the portal blood passes to the heart, which propels it to the lungs. Here, the blood, in addition to its parting with carbonic acid and taking up oxygen, undergoes other changes that fit it for assimilation. If the food has been imperfectly elaborated; and, particularly, if the liver has done its part slovenly, the fact is often proclaimed by the vile, putrescent odor of the breath.

When a person habitually overtaxes his digestive organs, the sympathetic nerves lose their irritability, and the portal veins become engorged. Thereupon arise congestion of the kidneys that checks the secretion of urine, and congestion of the liver that prevents the exercise of its several functions.

The portal veins, kidneys and liver being thus oppressed, should the digestion remain active, the evil would be still further increased each day until a serious illness intervened, and, by a forced abstinence, offered the natural powers a chance to recover themselves.

This congestion of the kidneys always induces functional disorder, and sometimes actual disease of the urinary organs. In such cases, a restricted diet and purgative salines are remarkably efficient in reducing the excrementitious products, and depleting the portal veins;

and, in this way, relieving the venal congestion. Even in albuminuria, this plan of treatment proves its superiority to any other by holding the disease in check, and by preventing at times, in recent cases, structural changes.

As to the liver, with its many offices, the engorgement of the portal circulation is even more detrimental. The digestive products passing through it are not properly acted upon, so that general nutrition suffers; and a scanty amount of bile is secreted, so that digestion flags. The same indications that hold in the case of the kidneys are here applicable. Low diet and saline purgatives reduce the work of and remove the blood pressure from the liver the same as they do from the kidneys.

The condition of the urinary and biliary secretions should be carefully observed in all disorders of the digestive apparatus, as, also, in all those that may arise therefrom.

If the urine be scanty, thick, high colored, contains mucus, and deposits a sediment, the digestive organs are, in all probability, clogged and the portal veins engorged. No medication directed to the kidneys can avail as long as the cause remains in operation. Sustaining food, tonics, diuretics, or other remedy suggested by the local disorder, will but add to the trouble already present.

The same statement applies to a congested liver. Nothing can supply the place of bile in the intestines, or remedy the many evils arising from the defective elaboration of the nutritive materials in the portal veins. Artificial digestives are nugatory, and tonics and strong food are injurious.

With this repletion of the portal circulation and oppression of the kidneys and the liver, the irritability of the sympathetic nerves becomes so blunted that the power of spontaneous restoration is well nigh destroyed. Now, a host of diseases are imminent. Which one will first declare itself depends upon the weakness of the part invaded, or upon some trivial exciting cause.

The starting point of this extreme congestive condition is, almost always, the gastro-duodenal mucous membrane, which had previously become inflamed by constant dietetic abuse. A diarrhœa or a purgative may, for a time, resolve the inflammation by exciting the secretion of the

mucous glands and the flow of serum from the intestinal capillaries.

The diet, however, not being restricted, indigestion, acidity, flatulence, pain, and the many other symptoms waiting upon dyspepsia soon declare themselves, and offer what natural barrier there may exist to an overindulgence of the appetite. At this point, provided warning is not heeded, the irritation of the ganglionic nerves, and the vitiation of the gastro-duodenal secretions intensify the original disorders, and add others to the list of more ominous import.

On the other hand, if the digestion continues unimpaired and free gratification of the palate be indulged in, the portal circulation will, eventually, be loaded with crude materials, and the liver and kidneys congested. Thereupon will arise irritation of the abdominal nerves, and through this irritation, greater obstruction of the secretive and excretive glands. This irritation, after a time, is propagated to the general nervous system, and then various forms of neuralgia are induced. The natural powers often attempt to burst the bonds that bind them by setting up a diarrhœa or a dysentery. Should spontaneous relief not present itself, nor art act in the right direction, the sympathetic nerves would become torpid and eventually semi-paralyzed. The peristaltic action of the bowels being checked by the imperfect nervous stimulus, all the dangers of obstruction are encountered. Now, as before, the prime indication is to deplete the portal veins, reduce the engorgement of the liver and kidneys, and thus restore the normal irritability of the nerves.

Under one or more of the conditions mentioned above, almost any disease may take its rise; for, if the body be nourished a length of time by poor materials its various structures will not be maintained at the normal standard. Besides, the ganglionic nerves, which preside over the circulation and cell-life of each and every part, will be robbed of this power and rendered incapable of making the most of such materials as shall be presented. A free indulgence at the table leads, in addition to the abdominal disorders hitherto mentioned, to eruptions, erysipelas, rheumatism, gout, and various forms of inflammation. Even pneumonia may be due to this cause. So, likewise, this state of the chylopoietic viscera may lead to anæmia, scrofulosis and tuberculosis.

Whatever the disease that may start from gastro-duodenal inflammation, congestion of the liver and kidneys and defective secretion and excretion, it is all important to regulate the diet and renew the functional activity of each part before attempting any special treatment.

Of all the organs engaged in the work of digestion, the liver holds the chief place. It elaborates the products of gastro-duodenal digestion, forms glycogen, secretes bile, and excretes coleslerin. If the materials for assimilation are not properly elaborated as they pass through the liver, healthy nutrition falters and fails, and if the bile flows scantily into the duodenum the digestion becomes laborious and imperfect. Thus the trouble acts in a circle, one of the several hepatic functions suffering, the others suffers also. If the bile be freely secreted, it will be pretty certain that the liver is performing its other duties equally well. Hence the condition of the liver can always be discovered by an examination of the evacuations, which contain the coloring matter of the bile.

In a healthy, thriving baby, confined to the breast, the evacuations are soft, adhesive, without odor, and of a deep pumpkin-yellow color. If the bile be scanty, the color will be lighter—orange, lemon, or straw color, and the odor sour, musty, or foetid. A green, dark, or black color is due to a small amount of bile mixed with a large amount of acid and other secretions. When the bile is deficient, the casein appears in minute or small pieces; but when absent, as shown by an ash, grey, or white color, the pieces are large and numerous, floating in an acid, offensive fluid. In such cases, which are seen in cholera infantum and marasmus, there is no jaundice, but only the results of indigestion and malassimilation. Jaundice seems to be wholly due to the absorption of secreted bile before it reaches the intestinal tube, and not to its suppression. In other words, the liver forms the bile from the blood, and consequently if no bile is secreted, no jaundice will follow.

A similar state of the movements is to be observed at any period of life whenever the milk diet is enforced. The green or black discharges do not, as has been taught, indicate biliousness. In fact, the bile is seldom in excess, unless a healthy stomach has, by a casual indiscretion, been subjected to unusual irritation. It is not the cause,

but the effect. A simple diet and laxatives is all the treatment required.

In cases of gastric and duodenal inflammation of some standing, mis-called biliousness, diet and laxatives alone are rarely sufficient to reduce the engorgement of the mucous membrane and renew the activity of the liver. An agent is needed that will act directly on the part or parts involved. Such an agent is calomel, which, it would seem, by a local impression on the mucous glands, excites them to secretion. If it fails in this, nothing will be accomplished, the inflammation continuing unabated; but if it succeed, the evacuations will be green or dark and contain mucus. Thereafter the evacuations will have a pale yellow color, showing that the action of the mercurial was upon the mucous glands and not upon the liver. When, however, the mucous inflammation has been subdued by one or more purgative doses of calomel, taken at intervals, and by a rigid adherence to the milk diet for a time, the evacuations will contain a greater, if not sufficient, amount of bile, as the normal action of the liver is due to a healthy state of the duodenal mucous membrane. The completeness and permanence of the cure is now wholly dependent on obedience to dietetic rules.

In obstinate cases, that the mercurial may diffuse itself over a large surface and attain its full topical effect, the calomel must be intimately divided by trituration with chalk or sugar, and given on an empty stomach some hours before it is carried off by a cathartic. Dividing this single dose into several, and administering one at two and three hours' interval, the impression of the calomel is still more decided. Should this course be repeated every second or third day, the mercurial would enter the capillaries and be carried to the liver, and then by direct contact it would stimulate this gland, as it had the mucous glands, to greater functional activity.

The mercurial being used longer still, it enters the general circulation and excites the glands of the mouth and skin.

Whether given in a single purgative dose or in repeated doses, mercury always acts topically on the glands: 1st, on the mucous glands of the stomach and intestines; 2d, on the liver, and 3d, on the glands of the mouth and skin. Being a foreign body, it is thrown off in the secretions, which the stimulus imparted by it has aroused. In the

case of the liver, this remedy is revolutionary in respect to the many offices filled by this, the largest gland of the body. The gastro-duodenal gland, or these glands and the liver, having been aroused to and maintained in proper activity by the mercurial, the patient's final restoration to health can come only through a strict adherence to dietetic rules. Here the real difficulties in the treatment commence, as on slight provocation the original morbid action is prone to return. The explanation seems to be this: the ganglionic nerves, when once their tonicity has been impaired, rarely ever regain it completely. Besides, the organization may have been below the average standard through a vice in the ancestral blood. Then, again, in infancy, when the constitution is being formed, the digestive organs may have been so recklessly abused as to intensify hereditary tendencies, and to institute others equally detrimental.

The great duty of the physician to the young is to eradicate the faulty tendencies of the ancestral stock by diet, air, sunlight, exercise, and the many other agencies that tend to build up a vigorous frame. Doing this, he will find in the coming generation that health is the rule and disease the exception, and that functional disorders will be rare, and that even tubercle, albuminuria, diabetes, cancer, will claim fewer victims.

Now and then one meets with a person living on this higher plane through the stamina of his ancestors. The laws of health are seemingly disregarded with impunity. The secret is, such a person is kept up by a reserved power that has been accumulating for several generations in the nerves of animal life. They resist and repel morbid influences. A vitality of a higher order is their happy lot. Others, less liberally endowed, fall into ill-health and perish by the way, while these retain their vigor and march on to the end of the journey. The difference lies in the ganglionic nervous system.

If, as hitherto represented, the condition of the secreting and excreting glands are such important factors in the maintenance of health, and if the first departure in most diseases from this state is due to a faulty digestion and assimilation, it is at once apparent that a mere diagnosis of the special disease excited is not sufficient in a therapeutic point of view. The names, rheumatism, neuralgia, dyspepsia, colic, eczema, etc., etc., mean but little to a

physician unless he goes deeper and discovers the underlying causes. These brought to light and removed, the disease, which is only a prominent symptom, disappears spontaneously, or subsides promptly under special medication. This while, the new materials for assimilation should be fully elaborated, and the old materials for dissimilation fully eliminated, and then, through the renewed tonicity of the nerves of animal life, the suffering organ or tissue would return to the normal state. The attainment of health consists in restoring each part to its original functional activity. The sphere of drugs is limited. They are mainly useful in the aid they may give in forwarding this one purpose. Were the druggist's shelves cleared of three-quarters of their contents, patients would not be the losers. What is needed is more attention to dietetic rules and less faith in the virtues of drugs.

If therapeutics should ever take its proper position, and medicine assume the title of science, it would be not by enlarging the pharmacopœia and refining nosology, but by restricting the sphere of drugs, and tracing morbid actions back to their source. This much being done, the cure not only, but the prevention of disease will be the glory of our art. Then the infant would be so cared for as to insure to it a fund of nervous and vascular force that would, under the like care thereafter, insure perfect development in youth, and a hardy constitution in later years. Thus it might come to pass, eventually, that each succeeding generation would start from a higher level physically, and also from a higher level morally, provided the faculties of brain and heart were cultivated with equal assiduity. That would be a happy day for the race, when a sound mind in a sound body was the common heritage.—*St. Louis Clin. Record.*

95 PIERREPONT ST., Brooklyn, N. Y.

Characters of Dead Part.

BY T. HENRY GREEN, M. D., LONDON.

The characters of the dead part vary with its structure, its vascularity, the cause of the necrosis, the acuteness of the process, and the possibility of the access of atmospheric air. The more vascular the tissue, the softer its

structure, and the more it is exposed to the atmosphere, the more rapidly and completely does it undergo decomposition. Bone, cartilage and tendons, which are firm, hard tissues, containing comparatively but few vessels, undergo very little alteration in structure and form; whereas softer parts are much more rapidly and completely destroyed.

In those cases in which the dead part contains but little water, as when the necrotic process is associated with obstruction of the arteries, and there is no interference with absorption by the veins and lymphatics, or when owing to the destruction of the epidermis, there is great loss of water by evaporation, it may gradually dry up and become converted into a dark shrunken mass which undergoes but little further change. This constitutes *dry gangrene* or *mummification*. It often occurs in necrosis from embolism, in that induced by ergot of rye, and in senile gangrene.

When, on the other hand, the part is moist, as where the necrosis is associated with venous obstruction, so that the return of blood and the absorption of fluids is interfered with, the gradual drying up of the dead tissue rarely takes place. Under these circumstances, if the part be exposed to atmospheric influences, septic bacteria obtain an entrance, and the moisture being favorable to their development, the dead tissue undergoes putrid decomposition, such as occurs naturally in the body after death. In a limb, for example, the liquor sanguinis transudes from the bloodvessels, and evaporation being to a great extent hindered by the epidermis, the transuded and accumulated liquids often form large bullæ on the surface. As decomposition proceeds, gases are generated in the part—principally sulphuretted hydrogen, ammonia, nitrogen and carbonic acid. These give rise to the emphysematous crackling which is so often associated with the gangrenous process. The tissues at the same time undergo a process of softening or liquefaction, the limb becomes exceedingly offensive, and, owing to alterations in the transuded hæmoglobin, changes from a reddish color to a brownish or greenish black. This form of necrosis is known as *moist gangrene*. It occurs only in external parts and in those internal organs to which the air is freely accessible, as the lungs. When met with in other situations it is due to infection with septic matter.

In many cases the necrotic process is associated with fatty degeneration. The dead tissue then presents somewhat different characters, often becoming *caseous* or *liquefying*.

The changes in certain tissues must now be considered more particularly. Firstly, with regard to the blood: This fluid undergoes the earliest and most rapid change. The hæmoglobin escapes from the red corpuscles, partly by exudation, and partly by the destruction of the corpuscles themselves, and dissolved in the liquor sanguinis permeates the surrounding tissues. The corpuscles are ultimately completely annihilated, nothing remaining but a few minute granules. The staining of the tissues with hæmoglobin is commonly known as *post mortem staining*, and the appearance it presents is very characteristic. The lining membrane of the heart and blood vessels, being in immediate contact with the blood after death, are the parts principally affected. The staining is of an uniform pinkish-red color, thus differing from the punctiform and stratiform redness of hyperæmia, from which it must be carefully distinguished. The amount of staining is in proportion to the rapidity with which decomposition has taken place, and to the amount of blood contained in the part at the time of death.

In muscle the arrest of nutrition is accompanied by a state of rigidity, known as the *rigor mortis*. This is a peculiar condition of the muscles observed in almost all bodies after death, in which they become firm and somewhat shortened, as though in a state of chronic contraction. It comes on as soon as the muscles have lost their irritability—i. e., their capability of responding to artificial stimulation; in other words, as soon as the nutritive processes have completely ceased. The time of its appearance will therefore depend upon the state of nutrition of the muscles at the time of death; the more healthy and vigorous this is, the longer it is before the nutritive processes completely cease, and consequently the longer it is before the rigor mortis supervenes. The length of its duration and intensity are in direct proportion to the lateness of its appearance. In people, for example, who are in perfect health, and die suddenly, as from accident, the rigor mortis does not usually come on until from ten to twenty-four hours after death; it is very marked, and often lasts two or three days. In those, on the other

hand, who die from some exhausting disease, as from chronic phthisis or the adynamic fevers, in which the nutrition of the muscles becomes very much impaired, the rigor mortis appears very soon, sometimes as early as ten minutes after death; it is very slight, and may pass off in less than an hour. It has been said that in cases of death from poisoning by carbonic acid and sulphuretted hydrogen, from lightning, and from some of the severer forms of the adynamic fevers, the rigor mortis is entirely absent. It is doubtful, however, if this is the case, as the rigor mortis has probably escaped observation, owing to its early supervention and rapid disappearance. As soon as the rigor mortis has passed off, decomposition of the muscular tissue commences.

With regard to the nature of the change—it was formerly supposed to be a spontaneous contraction, the last act of vitality on the part of the muscle. More recently, however, Kuhne and others have shown that it is really owing to the coagulation of the albuminous substance of the muscle—myosin. The myosin, fluid during life, coagulates when nutrition has ceased, the coagulation being attended by the liberation of a free acid. Thus is produced the firmness, hardness and opacity of the muscle, which disappear as soon as disintegration and decomposition commence. The transverse striation of the fibers then become indistinct, and gives place to irregular rows of granules and fat molecules, the muscle softens, its sarcolemma is destroyed, and ultimately nothing remains but a soft, structureless debris. This change occurs not only in muscle, but in the cells of other tissues a similar coagulation of the protoplasm takes place on the cessation of the nutritive processes.

Respecting the changes in other tissues—protoplasm generally not only coagulates but tends to become finely granular after death. It sometimes increases in size so that the cells look swollen; and in nucleated cells the nucleus often shrinks or entirely disappears. The cells ultimately break up into molecules of various sizes. In adipose tissue, the cells diminish in size, owing to the escape of the fluid fat which diffuses itself throughout the surrounding structures. The fibers of connective tissue swell up, become opaque, and ultimately liquefy. In nerve fibers, the white substance of Schwann coagulates and collects into small drops (myelin) with a neurilemma.

Cartilage and bone resist the necrotizing process longer than any of the tissues and are the least altered by it.

Terminations.—The termination of the necrotic process varies. It may, after involving a greater or less extent of tissue, become arrested, and a “line of demarcation” form between the dead and living parts—*Circumscribed Gangrene*; or the process may continue to extend without any such attempt at recovery—*Diffuse Gangrene*. Whether the one or the other occurs will depend, in great measure, upon the presence or absence of any pre-existing local weakness either in the circulation or the tissues. Necrotic processes in a healthy individual tend to become circumscribed, but when the circulation is enfeebled, or the vitality of the tissues impaired, as in the aged, they are liable to be diffuse. (See “Senile Gangrene.”) The presence of septic bacteria also tends to interfere with the arrest of a necrotic process.

When the process becomes arrested, the dead tissue—the sphacelus or slough—acts as a foreign body, and as such sets up inflammatory changes in the adjacent living structures, and by this means it is ultimately removed or becomes encapsuled. The tissues immediately surrounding the necrosed part are thus in a state of inflammation, as is evidenced in external structures by their swelled condition, red color and high temperature. As the necrotic process ceases, the dead fragment becomes limited by this line of inflamed tissue, which constitutes the “*line of demarcation*” between the dead and living parts. Along this line a process of suppuration takes place, and by means of this the dead mass is gradually separated from the surrounding structures. The ultimate termination of the process depends principally upon the situation of the affected part—if this be superficial, the slough is thrown off, as in external parts, the intestines, the pharynx, etc., an ulcerated surface being left. If the dead mass is deeply seated, its removal becomes possible only by the extension of the necrotizing process to the surface, as is exemplified by the spontaneous removal of necrosed bone through fistulous openings in the soft parts.

In other cases the inflammatory process which takes place in the tissues surrounding the dead part is less intense, and the formation of pus is less abundant, and is soon followed by that of vascularized connective tissue,

a layer of which is ultimately formed around the necrosed mass, by which it becomes *encapsuled*. This occurs especially in internal parts. Examples of it are furnished by foreign bodies, hemorrhagic infarcts, accumulated epithelial products, portions of necrosed bone, and a fœtus in the abdominal cavity, all of which may thus become surrounded by a layer of connective tissue. The part, when thus encapsuled, is usually rendered inert and no longer acts as an irritant to the tissues in which it lies; it undergoes a gradual process of absorption and drying up, and often becomes calcified.—*Pathological Anatomy*.

Puerperal Eclampsia.

BY L. M'FARLANE, M. B.,

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SOME time ago I sent you a report of three cases of puerperal eclampsia treated by the subcutaneous injection of morphine. I then expressed my firm belief in the efficacy of the treatment adopted. I have since had two cases similarly treated, with like good results.

The treatment of eclampsia is as interesting a topic as any in the whole circle of our art, as it is a common and fatal disease. The various systems of treatment adopted from time to time have been anything but satisfactory, although nearly every drug in the whole range of the Pharmacopœia has been tried. It is unnecessary for me to enumerate the different remedies used and the results obtained, as they are perfectly familiar to the reading student and the active practitioner—suffice it to say that each has had its advocates, although the results obtained have been far from satisfactory.

The lancet is still held by some practitioners as the sovereign remedy in this disease. But as to its uniform or general benefit I am very doubtful—there is nothing in the nature of the case, or in the apparent condition of the patient, to justify its use. Not a few practitioners conjoin active purging with venesection, or trust to it alone. Some have great confidence in chloroform and ether, others in emetics, others in chloral hydrate and the bromides, while I believe from reading the *Canadian*

Journal of Medical Science, there is one individual whose faith is strong in the efficacy of ten grain doses of quinine every two hours, although he has failed to inform the reader how it was administered.

There has of late years been an endeavor on the part of the leading minds in our profession, to treat the disease on a pathological basis. This is to be highly commended, and I hope the investigation will be pursued till a fixed pathological basis is found upon which we can confidently rest our treatment.

After all that has been written on the subject, I do not think there is a tittle of evidence to prove that disease of the kidneys has anything to do with the production of eclampsia, save as a casual companion or possibly a favoring condition. It is quite as likely that the condition of system giving rise to eclampsia may be the exciting or predisposing cause of the disease of the kidneys. Cases must have come under the observation of every practitioner doing a large midwifery practice, of patients having almost complete anuria without any sign of convulsions. And it is a matter of everyday occurrence to meet with cases where the urine is loaded with albumen, and the limbs and body dropsical, without any appearance of eclampsia. Now, if the diseased condition of the kidneys is the cause of convulsions, as claimed by some pathologists, why should so many escape who are suffering from it? It would be supposed that the same cause would produce the same effect in all cases. It is a well-known fact that ague is always produced by the same malarial poison, and that the person whose system becomes saturated with it will necessarily get the disease. The same remarks will apply to typhoid fever, tubercle, syphilis, and, in fact, to every disease affecting the human system; each has its specific cause, and none can be produced by any other but the specific poison.

It must be admitted, however, that in many cases we are unable, by any means at our command, to discover the pathological condition upon which it depends. But this is no argument against its existence. For the particular disease under consideration the pregnant condition is necessary to its production, and consequently it will be well for us to consider, in a practical way, some of the leading features in connection with this condition. In the first place the system will be burdened with the

extra work of supplying and developing the foetus. The heart will necessarily have more work to perform in carrying on the foetal as well as the general circulation. The nervous system will also have extra duties in contributing to the development going on.

Now, in order to have a healthy body it is necessary to have the circulatory and nervous systems in a healthy state. If either, or both, are disturbed from any cause, the effect is soon felt on the general system. It is only necessary to notice the effect of fear on the human system to illustrate this fact. Look at the expression of countenance, the nervous tremor, the disturbed digestion, and sometimes the involuntary evacuation of urine. If fear has such a marked effect upon the system, is it not reasonable to suppose that the over-taxing of the nervous and circulatory systems will produce not only eclampsia, but disease of the kidneys? It is evident that the foetus in utero acts as a quasi foreign body, inasmuch as it serves as a source of irritation from the very commencement of gestation. The patient almost immediately after conception is disturbed by nausea and vomiting, which sometimes defy our best efforts to suppress. The labor required of the circulatory and nervous systems increases as gestation advances. Consequently, at or near the termination, the nervous centers are worked up to such a state of tension, if I may so express myself, as to relieve themselves by that spasmodic condition called convulsions. This, I believe, is substantially all we know, or at least, by far the most we know about the etiology of eclampsia. It is an explanation, I grant, somewhat vague and general: but in the absence of any other more exact, or to the point, I am inclined to accept it.

Before entering on an explanation of the treatment, allow me to give a brief report of the two cases before mentioned:

Case I.—Mrs. G——, aged twenty-six, Primipara, was taken in labor about 1 A. M. on the 4th of February. I was sent for about 9 A. M., and found the head presenting, and the labor well advanced in the second stage. The child was born about one hour after my arrival. I removed the placenta, made my patient as comfortable as possible, and remained in the house for half an hour or more. On leaving, she expressed herself as feeling very well. In about one hour afterward I was sent for in great

haste, and on my arrival found my patient working in a convulsion. The nurse informed me that she had three fits before I got there. I at once administered one-quarter of a grain of morphine subcutaneously, which controlled the convulsions, the patient falling into a quiet sleep which lasted for several hours. In the evening of the same day the nurse was removing some of the soiled clothing, when the patient attempted to sit up, and was seized with a slight convulsion, which was almost immediately controlled by a second injection of $\frac{1}{4}$ grain of morphine. After this she went on to convalescence without any further symptoms of eclampsia.

Case II.—Mrs. T——, aged about thirty, pregnant with her third child, was seized with convulsions at the commencement of labor. Drs. Winstanley and Richardson chloroformed the patient, dilated the os, and delivered with forceps. The fits continued at regular intervals from some time in the night till the following afternoon, notwithstanding the use of chloroform and chloral hydrate. I saw her about 3 P. M., when a quarter of a grain of morphine was administered, after which the convulsions ceased for three hours. She then had a slight convulsion, when I again administered a second injection of $\frac{1}{4}$ of a grain of morphine, which completely controlled the eclampsia—the patient going on to convalescence without any further trouble.

I will now briefly give my reasons for the use of morphine in the treatment of this disease.

I before intimated that the increased labor required of the heart in carrying on the foetal circulation might disturb the general circulation, and as a consequence anæmia of the brain be produced. In the second place the brain and the nerves of organic vitality become irritated and exhausted by the duties required of them.

The question might here be asked, if this theory is correct, Why do not all pregnant women suffer from eclampsia? The only answer I can give to this query is that some women bear their pregnancy more lightly than others, and that there is not so much disturbance of the nervous and circulatory systems.

However, if this theory is correct, as I am inclined to think, we have two indications for the use of morphine. In the first place, by giving this drug we produce an increased flow of blood to the nerve centers; and in the

second place, by its soporific effect the brain is allowed to rest while increased power is gained to carry on the nervous functions of the body. The control which morphine exercises over the disease, both in the preliminary stage, as well as when the convulsions actually set in, is so prompt and decisive as to convince the most skeptical after having given it a fair trial. No doubt in some cases, from the violence of the attack or the injury done to the brain by the first onslaught of the convulsions, the medicine will fail; but I am fully convinced that if properly administered and in time, we have in our hands a sure and certain remedy for this disease.

I believe that many of the failures reported after its use can be accounted for by the mode in which it is administered. To give any preparation of opium in this disease by the stomach is of little, if any, use, as the sickly condition of the organ is such that the medicine is not absorbed in time to be of any benefit to the patient. And no man should venture an opinion as to the virtues of the drug unless he has given it subcutaneously. I am satisfied that in the two cases before mentioned the dose was not sufficiently large. If half a grain or a grain had been used at the first injection, the probabilities are that a second fit would not have occurred. I would, therefore, advise at least half a grain at the first dose.

There need be no fear in administering large doses of morphine in this disease, as the system appears to tolerate large quantities of it. I am satisfied that you can give doses with safety in eclampsia, that would prove fatal in any other form of disease.

However, every indication can be met, by giving from one-half to one grain at an injection. And I venture to say if this quantity is given, there will not likely be any necessity for a repetition.

The point to note in giving the drug is to give it early, and in sufficiently large doses to control the convulsions.

The necessity of hastening the labor should not be neglected or overlooked, as I consider the sooner the delivery takes place, the better is the chance for the recovery of the patient, as you remove the main source of irritation.

In conclusion, allow me to urge on those of my readers who have not yet tried the drug, to avail themselves of the first opportunity to put it in practice. And I feel

confident that after giving it a fair trial they will agree with me that it is the sovereign remedy in this disease.

Surgical Treatment of Empyema.

THE subject was introduced by Dr. C. Gerhardt (Wurzburg), who first reviewed the opinions of the earlier writers on the subject. Passing to the practical side of the question, he expressed the belief that a small empyema might be cured spontaneously by absorption; another favorable termination was by expectoration, after a spontaneous opening into the lung; after two or three weeks of purulent expectoration, such cases got well. As to operative interference, he found that a single aspiration sometimes resulted in a complete cure; a method which had been found useful consisted in replacing the pus withdrawn by some indifferent or antiseptic fluid, without the admission of air to the chest. He advocated the free opening of the chest under antiseptic precautions; and thought that to wash out the pleura was not free from danger. Very early childhood gave less favorable, the middle period of childhood more favorable, results than adult age.

Dr. Ranke (Munich) thought that in children an empyema comparatively seldom opened into the bronchi; this, he thought, was the most favorable termination. He made use of incision, with antiseptic precautions, and under this system found that his patients generally remained about six months in hospital.

Dr. Jacobi (New York) had seen three cases of empyema in infants, one containing as much as twelve or thirteen ounces, in which recovery had occurred after a single aspiration.

Mr. F. Richardson Cross (Bristol) thought the early removal of pleuritic effusion was necessary to insure the re-expansion of the lung. He advised an incision in the eighth or ninth intercostal space, with antiseptic precautions, if aspiration failed after two trials. He had recently had three very successful cases treated on this method. One of them was a most unfavorable case, in a girl aged eight, but recovery ensued in seven weeks.

Mr. R. W. Parker (London) said, that as the question of treatment must very much depend on the mechanical

condition of the chest, it would be well to divide empyemata into two chief classes, viz.: 1. As found in children; 2. As found in adults. Whatever method of treatment was adopted, no favorable result could be expected unless the conditions regulating chest-movement assisted. The cavity of the empyema could not be emptied unless the lung could re-expand, or the chest-wall fall in. In children these conditions were present more commonly than in adults; hence the disease in them was less serious. In old people, whose chest-walls were very rigid, empyema was always a serious, often an incurable, disease. He believed that aspiration, two or three times repeated if need be, was the best treatment in childhood, and it ought always to be adopted before other measures were tried. No doubt the next best mode of cure was the expectoration of pus through the lung; but it was hardly safe to postpone treatment until this took place spontaneously, and, unfortunately, there were no mechanical means by which it might be brought on. When aspirations had failed, a free incision into the lowest and most dependent part of the chest, with antiseptic precautions, was called for. In adults he also advocated aspiration; but if the cavity were large he also suggested that filtered and carbolyzed air should be injected into the pleura; this air helped to replace the fluid, lessened the dragging sensation often felt, and prevented reaccumulation.—*British Medical Journal*.

New York Academy of Medicine.

Stated Meeting, November 17, 1881.

"THE CELL DOCTRINE AND THE BIOPLASSON DOCTRINE."

INTRODUCTORY to the paper the author gave a *resume* of his observations on hyaline cartilage, given in full at the last meeting of the American Laryngological Association, and published in the *Archives of Laryngology*. It was to the effect that hyaline cartilage had been considered one of the simplest of tissues, being made up of a dense basis-substance, in which were imbedded soft corpuscles or granular cells. The chief theories in explanation of the manner in which these corpuscles obtained nutrition had been imbibition and the existence of delicate channels, in the

basis-substance, through which nutrient fluid could pass and reach the granular bodies.

Dr. Heitzman, of New York, however, had discovered that the hyaline cartilage was really made up of blocks of living matter united by threads of living matter, that is, that hyaline cartilage is a network of living matter, into which lumps of living matter had been placed. The same line of investigation had been extended to the various tissues, and the conclusion reached that the whole body consisted of lumps and threads of living matter united in this manner.

Dr. Elsberg explained the cell theory as represented by Schwann, Virchow, and others, and showed that the word "cell," to designate the organic form element, had long been a misnomer, and claimed that since Dr. Heitzman's discoveries it was not only erroneous, but misleading. Hitherto the amæba had been supposed to consist of a homogeneous, structureless lump of jelly like living matter called protoplasm, containing granules, supposed to be foreign particles; but really it was a mass of living matter arranged into a network, the points at which the threads intersect each other being thickened and constituting the granules supposed to be foreign bodies, and in the meshes of this network was contained the "non-contractile" matter.

He regarded the word "protoplasm" as etymologically incorrect, and preferred the word "bioplason."

The essential difference between the cell doctrine and the bioplason doctrine was that, according to the former, each tissue was made up of a number of unities; according to the latter it was composed of masses of living matter interconnected by threads of the same living substance. [See MEDICAL RECORD, vol. x., p. 364.]

Dr. C. Heitzman said that he made his discovery in 1873, the more theoretical and scientific part of which had been laid before the academy by Dr. Elsberg. There were, however, practical questions closely connected with the doctrine, which, he thought, would form some part of future medicine, as it would enable us to determine the constitutional viability of each individual. What Dr. Elsberg had described as a reticulum of living matter varied greatly in different individuals, and by the aid of the microscope it could be positively determined how much of living matter there was present in each single

element of protoplasm formerly called a cell. The white blood-corpuscle was a constituent part of the body, and in it could be found all the features necessary to indicate the amount of living matter in the entire body; in other words, the actual constitution of the individual. [See MEDICAL RECORD, vol. xi., pp. 321 and 322; vol. xii., p. 94; vol. xvi., p. 68.]

“PYÆMIC PAROTITIS.”

Dr. C. A. Leale read a paper on the above subject, in which he spoke of suppuration of the parenchyma of the parotid gland, in contradistinction to the idiopathic affection commonly called mumps. He believed that the primary step in the pyæmic parotitis was ulceration, or solution of continuity at some distant part of the body. He had observed metastatic abscesses in the parotid gland only where ulceration had existed in some part of the body previously. Hence, cases had occurred in connection with typhoid fever, dysentery, suppurative osteomyelitis, diphtheritic ulcer of the posterior fauces, pelvic cellulitis with ulceration, peritonitis, etc., and were embolic in origin.

Dr. Leale then reported several cases and presented two patients who had had suppurative parotitis, which he believed to be due to the cause mentioned.

The *first* was a case in which the abscess broke through and pus discharged from the external auditory canal; it followed acute general peritonitis, and pelvic cellulitis with formation of abscess. Pus could be seen exuding into the external auditory canal, near the membrana tympani. The pelvic abscess opened spontaneously into the vagina. There was also post-pharyngeal abscess, which was opened. The discharge from the ear continued for more than a year. At one time there was complete blindness, complete deafness on the affected side, and nearly total loss of hearing upon the opposite side. The patient ultimately recovered, with hearing and vision completely restored.

The *second* was a case in which, with suppurative parotitis, there was discharge of pus from the external auditory canal on both sides, and there was also complete deafness for three weeks. Hearing in both ears was completely restored.

The *third* was a case in which suppurative parotitis

followed typhoid fever, with hemorrhage from the bowels. The abscess communicated with Steno's duct, discharged behind the ear, and nearly, or quite all the gland sloughed away. In this case, as an interesting item in its clinical history, goitre developed, which ultimately disappeared under the use of iodine. The patient was presented to the academy.

Dr. Leale then referred to a number of cases which had fallen under his own observation, others, which had been reported by different writers, and in which profuse suppuration had existed, without the occurrence of parotid abscess. From the observation of his own cases, he had been led to believe that suppuration of the parotid gland was best explained by the theory of sepsis; micrococci poison was conveyed from a distant point to the parotid gland, and there developed an abscess or abscesses. He had not seen such metastatic abscesses occur, even with profuse suppuration, provided the pyogenic membrane remained unbroken; neither had it occurred under his observation with the abundant suppuration of empyema. Nor did hospital gangrene seem to be a cause of these abscesses.

Dr. Leale then referred to cases of osteomyelitis which he had reported in the "Surgical History of the War." He also referred in passing to the difficulty of removing the parotid gland, and mentioned cases in which the operation had been done partially or completely by Drs. A. C. Post and William T. White.

The President referred to cases of suppurative parotitis which he had seen in puerperal women. In 1874 he saw a young married woman who had a miscarriage; subsequently pelvic cellulitis; afterward distinct symptoms of pyæmia, followed by abscess of the parotid gland and death by exhaustion. In Bellevue Hospital he had seen two cases in which the patients died from exhaustion produced by suppurative parotitis of pyæmic origin.

Last winter he saw a patient who had a miscarriage; two weeks subsequently pelvic cellulitis, in which abscess occurred, and two ounces and a half of pus were removed with the aspirator. One week afterward abscess of the parotid developed, which was opened; subsequently the parotid gland upon the other side suppurated. Two weeks after that, ulcerative endocarditis and pericarditis devel-

oped, and the patient died two days after the development of the cardiac complications.

Two years ago he saw a case with Dr. Markoe, in which the patient had pyæmia, following the running of a tooth-pick under a finger-nail. Suppurative parotitis occurred; the pus was deep-seated; the abscess was opened, it discharged freely, and the following morning the patient died of œdema glottidis.

These cases illustrated the fact that the occurrence of suppurative parotitis with pyæmia was not so very rare.

Dr. A. C. Post and Dr. William T. White stated that in their cases it was not known positively that all of the parotid gland was removed.

Dr. Joel Foster referred to a case in which the parotid gland was completely removed by Dr. McClellan, of Philadelphia.

Dr. H. D. Noyes had been interested in listening to the report of Dr. Leale's cases, in which the discharge found its way into the external auditory canal, and also where both vision and hearing were implicated. He thought the discharge into the external auditory canal could find its explanation in the fact that the cartilages of that canal were embryonically developed in parts, and probably a fissure or imperfect fusion remained. Probably these portions of cartilage were less developed in some persons than in others, and at the different points where there was the least resistance the pus might find its way through and make its exit in the direction of the external auditory canal.

Dr. Noyes thought it very remarkable in Dr. Leale's case in which there was deafness in both ears and total blindness, that there should not have been any serious brain-symptoms. The case was probably one of very circumscribed inflammatory action at the base of the skull, which must have affected the sheaths of the optic nerves, and doubtless gave rise to choked optic disc. Ophthalmoscopic examination would have been exceedingly interesting, and probably would have revealed that condition of the respective papillæ. The entire recovery of vision favored the hypothesis that there was nothing more than œdematous effusion. Dr. Noyes then referred to a case in which inflammatory action affecting the semicircular canals followed idiopathic parotitis. The patient recovered, with total and permanent loss of hearing upon one

side, and there had been no symptoms of acute inflammation of that ear. There was the characteristic staggering gait, which was never fully recovered from. The precise way in which such results were produced he was unable to say, but the complication was sufficiently common to make the case worthy of special mention.

The Academy then adjourned.

Intra-Capsular Fractures.

Dr. Maxwell (Illinois State Med. Society) gives the following on the above subject, together with the history of two cases in which his method of treatment was successful:

The treatment of intra-capsular fractures has enjoyed the attention of the best minds in this country. In this paper I intend to summarize the teachings of modern surgery, and suggest some additions to the treatment. Intra-capsular fractures are those involving the neck of the femur, entirely inside of the capsule of the joint. They are peculiar to advanced age and to females. They are remarkable on account of the small amount of force necessary to produce them, and for the extreme difficulty in obtaining union by bone. As age advances, remarkable changes take place in the shape and size of the neck of the femur. It joins the shaft more nearly at a right angle, diminishes in size and becomes more fragile. The possibility of bony union in these fractures has been discussed with no little warmth. Astley Cooper's and Frank Hamilton's researches show that, though possible in some instances, it is so rare as not to invalidate the truth of the assertion that there generally is non-union. Union does not take place for the reasons:

1. There is a deficient vascularity in the bones, due to their relative positions and deficiency of the artery passing through the ligamentum teres.

2. Whatever reparative material is developed has no local permanence, there being no support or nidus for it.

3. This material becomes so diluted with increased secretion of synovial fluid, as to be incapable of making any progress.

4. Imperfect coaptation and the impossibility of keeping the parts quiet.

These causes, combined with the action of the powerful muscles at the site of fracture, constitute the chief reasons for non-union.

The treatment has been the subject of difference of opinion. Erichsen advocates a similar plan to Agnew's. The failure on the part of surgery to have means to coaptate the ends of the fractured bones is enough to account for the failure of many fractures to unite. If surgery proposed no better methods of treating fractures of long bones than those for intra-capsular fractures, there would be, no doubt, as much non-union in these, and it would be said that the bones are degenerated, etc. Is there not too great a tendency to saying such things instead of trying to put the bones in good coaptation? Extension must always be used in the direction opposite to the displacing force.

All the forces act on the lower fragment, and the tendencies to displacement are upward and inward. The muscles are strong and numerous and tend to draw the femur upward, shortening the limb and turning the thigh outward, and throw the trochanter behind the acetabulum. There is eversion of the foot, and crepitation can be distinguished when extension is made. The teachings of modern surgery, that extensions be used, is not sufficient.

The following plan, which I offer, is rational, and has been successful in two cases in my practice:

Apply extension in two directions in opposition to two forces, longitudinally and laterally. Put adhesive strips along the leg and foot, to hold a cord passing over pulley and attached to weight. Lateral extension is made by a five inch muslin band around the body. A splint is applied to the inner aspect of the thigh. A pulley is placed opposite the crest of the ilium and four inches above it. Counter extension is made by the body; the bed is elevated at the foot, one foot on the fractured side and eight inches on the other. The head post on the injured side is elevated four and a quarter inches. By this method the fragments are brought as nearly correctly in apposition as is possible. The inner surface of the capsular ligament is rendered tense and applies itself to the sides of the neck and holds it.

MICROSCOPY.

Koch's Demonstrations in the Germ Theory.

AMONG the many interesting facts brought forward and the discussions held during the Congress, none surpassed, if indeed any equaled, the work done by Dr. Robert Koch, of Berlin. He first showed some of the new methods of cultivation, which surpass in beauty and simplicity, as well as in usefulness, anything that has yet been done in this way. He began to study the growth of pigment bacteria and boiled potatoes, and soon discovered that, as the organisms were there growing on a firm substratum, they did not become mixed up with each other or with accidental contaminations, and he could always find a spot where the bacterium was pure. He could then inoculate another potato from this spot, and obtained the organism pure. Any organism introduced accidentally grew only where it fell, and thus a pure cultivation from a pure part was always possible; on the other hand, if these organisms had been growing in a fluid, the introduction of another form would have rendered them impure forever. Dr. Koch exhibited specimens of *micrococcus prodigiosus* which produces a red pigment, and also of the bacillus which causes blue pus, and that which causes blue milk. Other forms of bacilli were shown which microscopically were indistinguishable, but which could be at once separated from each other by differences in their mode of growth on solid substance. The advantage of a solid, rather than a liquid, cultivating material being thus apparent, Dr. Koch next turned his attention to the solidification of other cultivating materials, such as would nourish pathogenic bacteria, and he found that by the addition of gelatine to the fluid, used in the proportion of three or four per cent., a solid cultivating material was obtained, whose power of nourishing organisms was not in any way interfered with by the presence of the gelatine.

Some of this material, being rendered fluid by heating and spread out on a slide, was allowed to solidify, then bacteria could be sown on it, and their mode of growth watched with a low power of the microscope. Thus, a minute quantity of dry earth was scattered over such a slide, and, in a few hours' development, could be seen to

be accruing around almost every particle. In this particular specimen seven different sorts of bacilli were present; many of these could not have been distinguished from each other, by the microscope, but a difference was at once observed between their mode of growth on the solid substance—some forming round balls, others growing out in a star-shaped manner, others growing in a fine net-work, etc.

In the same way, the number and nature of the organisms present, in any given quantity of air, could be estimated. A broad, shallow vessel was filled with the gelatine mixture and exposed for a given time to the air. At every point where an organism fell on it, growth occurred, and thus the number and nature of the organisms present could be at once ascertained. But, further, as each organism was a pure cultivation, pure flasks could be inoculated from each variety, and thus its further life-history and pathogenic characters could be investigated.

Similarly with water. The material in a test-tube having been rendered fluid, a given quantity of water was shaken up with it until solidification occurred. At every point where an organism was present in the water, development occurred, and thus the number and nature of the organisms present in a given specimen could be at once ascertained.

Dr. Koch also exhibited some of his pathogenic bacteria. Animals which had been killed with anthrax were shown. The fatal nature of the poison was demonstrated; the constant presence of the *bacillus anthracis*, its mode of growth in the gelatine substance, and its virulent properties after having been grown in it, were all made apparent. The bacillus of mouse septicemia, which is described in his work, was shown in a similar manner. For several months this organism was cultivated in gelatine blood serum, forming a fine, cloudy mass and retaining its form and other characteristics. A minute drop of this was placed under the skin of a mouse. This animal died in forty-eight hours; and in its blood were numerous bacilli. Another mouse inoculated from this blood also died. In gelatine inoculated with this blood these organisms developed; and after further cultivations with this, the minutest drop killed another mouse. Septicemia was shown in pigeons, rabbits, mice, etc., due to a minute bacillus of peculiar form, resembling in appearance the

organism of the "*cholera des poules*" of Pasteur. The same sort of proof was given with regard to this organism as in the former case. And, lastly, a beautiful form of erysipelas was shown in the ear of rabbits, caused by the inoculation of the rod-shaped bacillus of the septicemia of mice; this sometimes, though not always, killed the animals.

The importance of these experiments can scarcely be estimated at present, but there is no doubt that they show a great advance, and no work has more tended to throw light upon the complicated subject of pathogenic bacteria than that of Dr. Koch. Dr. K. lays great stress on the value of microphotography as essential to an accurate record of facts; and photographs which he exhibited on Friday, were certainly very fine examples of what can be done in this way.—*Medical Times and Gazette*.

The Phenomena of Growth Among the Microscopic Forms of Life.

(CONTINUED FROM LAST NUMBER.)

SOMETIMES on an old decaying log by a brook, along the road, or half buried in forest soil where it is always moist, there will be found masses of a soft, jelly-like substance. This, when examined with a microscope, may be seen to move. It is a mass of living jelly. Is it an animal or a plant? This question has puzzled the microscopists for years, and even now they are not all agreed as to the affinities of the myxomycetes, as they are called. Saville Kent, one of England's most eminent authors, believes in their animal nature, but they are usually claimed by the botanists, and it is not unlikely that they will yet be identified as a stage in the life-history of certain fungi. But the mere fact that there is still ground for a difference of opinion regarding their animal or vegetal nature proves that the two kingdoms run very close together. A manifestation of plant-life that has been the source of much confusion is the motile stage, which comes into the life-history of many of the algæ, serving as a means of propagation. The contents of certain cells become changed into one or more swarm-spores, as they are called, which consist of minute, green, spherical or oval, protoplasmic

masses provided with one or more hair-like appendages, which, lashing constantly in the water, cause the organisms to swim about. One morning I sat down to examine, with the microscope, some algæ from a collection of the previous day. Among them I found some long, cylindrical filaments composed of a series of short cells, about as long as broad, joined end to end, and filled with bright-green contents. In some of these filaments the green contents of each cell had collected into a ball, which was moving restlessly. In a few moments the membrane that confined them ruptured on the side, and allowed the moving masses to escape. One by one, in rapid succession, the little balls, only about $\frac{1}{5000}$ in diameter, were set free, and they moved away rapidly. They were the swarm-spores of the plant *Ulothrix*, and upon close inspection each one was seen to be provided with two very slender filaments springing from one end of the slightly elongated mass, two or three times longer than the body, and so fine that they only became visible when greatly magnified and carefully illuminated. By the constant lashing of these delicate appendages the swarm-spores moved about in the water.

This process of propagation is quite common among the cryptogamic plants. After the swarm-spores are set free, they swim about for a short time, then become attached to something and begin to vegetate, forming a new plant like the parent. I remember watching, for the greater part of a night, the formation of swarm-spores in the cells of the beautiful *Spirogyra*, an algæ which is very common in the early spring in roadside ditches and ponds. A large number formed in each cell of the *Spirogyra*, and for a considerable time moved about in their confinement very actively. At last an opening formed in the cell-wall, through which the active spores slowly made their way, just as an India-rubber ball might be forced through an opening smaller than its diameter. Once free they were soon lost sight of.

These swarm-spores are simply masses of protoplasm, colored green by chlorophyll, the coloring matter of the vegetable kingdom, which have a scarcely perceptible enveloping membrane, with the two or more hair-like lashing filaments. They do not assimilate food, but pass an ephemeral existence swimming through the water, finally becoming attached to something, when they begin

to grow into new plants. They serve to propagate the species of the plants from which they spring. Yet, although so utterly devoid of organization, they are sensitive to the influence of light, and in the mother-cell they seem to mature at certain hours of the day, which vary with different species. Place the algæ in a shallow dish, and the spores will be set free in a greenish cloud, which slowly makes its way toward the window, and finally forms a green border around the dish on the side nearest the light.

In these processes we have seen no indication of any distinction between the different cells, such as would lead to the inference that one is a male-cell and the other a female. But the homology of nature seems to require that there should be such a distinction some time in the life-history of even the simplest plants; for only by the union of opposite elements can the vegetative life be maintained. We can hardly suppose that a single cell could give rise to an unlimited progeny by division continued indefinitely. The vitality of the later generations would finally be exhausted, and the species could then only be maintained by some kind of sexual union which renews and vivifies. But while we say this, it should be understood that the characteristics of the male and female elements of plants and animals are not known. Conjugation signifies the union of these two elements, but in the lowest stages of life no difference can be distinguished between them. It is even doubtful if they possess any distinguishing characters, for when any two particles of protoplasm come together and coalesce, we call it true conjugation; and the living contents of a single cell may separate into two parts, one part passing to one end and the rest to the other end of the cell, after which the two portions may again unite and form a spore.

Passing a step higher in the scale, we find many plants that conjugate by the union of the cells of two filaments and the intermingling of their protoplasm results in the formation of a spore, from which new plants develop. This is the case with all the family Zygnemaceæ, the fruit of which is called a zygospore. As an example of this interesting process, we may choose a species of *Spirogyra*, a filamentous alga common in our roadside ditches, which has received its name from the spiral arrangement of the coloring matter within the cells. When the time of con-

jugation arrives, the cell-contents lose their regular arrangement, and finally two filaments, lying side by side, will send out short extensions, which gradually approach each other, unite by their ends, after which, by the dissolution of the terminal partition, there will soon be formed tubular passages from the cells of one filament to those of the other, and the two plants will be united as by the rungs of a ladder. Then all the protoplasm of the cells of one filament flows into the cells of the other, and there forms a spherical mass, enclosed within a rather thick wall, called the zygospore. The original cell-walls then decay, the spores ripen, and from each of them a new plant like the parent form will spring. Watching them under the microscope from day to day, spiral bands will be seen forming in the interior green mass. In due time the outer covering breaks, and the young plants appear as oval cells with bright-green spiral bands of chlorophyll which slowly elongate, divide and produce new filaments.

We have no time this evening to indicate the important role which the most minute living creatures play in the world; but, owing to the interest now taken in sanitary questions, it seems advisable to briefly refer to those minute plants known as bacteria, which are supposed to be the active agents in the production and spread of contagious diseases.

It has been found that in the blood of men and animals suffering from certain disorders, of a more or less fatal and contagious character, there are numerous rod-like or spherical particles, which are the bacteria. By cultivating these organisms in suitable fluids, such as milk, extract of meat, chicken broth, etc., they can be made to propagate rapidly, and the progeny, after many generations, will still possess the power of producing the disease when introduced into the blood of a healthy animal. But it has also been discovered that by cultivating the same virulent bacteria in a certain way, they can be so changed in their action upon the system that they will no longer produce the disease in its original severity, but give rise, by inoculation, to a modified form of the same disease which is mild, not in the least dangerous, and only local in its external manifestations. Yet this milder form of the disease is a protection against the more malignant type. Upon this fact depends the efficiency of vaccination. The disease produced by vaccination is a

mild form of small-pox. The results of recent investigations leave no reasonable doubt of the protective influence of vaccination, and, while there are always a few headstrong and conservative individuals in every profession, it is not strange that there should still be a very limited number of physicians who oppose vaccination as a useless proceeding. But there are not two sides to this question, and it must be the opinion of every person who will study the subject with care, that the welfare of the community requires that vaccination should be made compulsory.

Upon every leaf and flower, in the air and in the water, from the regions of eternal snow down to the bottom of the deepest seas, the simplest forms of life are found. Among these, wherever they may be, the struggle for existence is incessant, and one has only to make use of a microscope to see the fight in progress—battles which, in miniature, portray the greater conquests of beasts and men, which have resulted in the present condition of development.

Within the microcosm of a single drop of stagnant water, may be found myriads of living forms of curious shapes and strange habits, all manifesting the powers of growth and reproduction in the simplest form. Higher in the scale the processes of life become more complex, gradually, as development proceeds, we see a differentiation of the cellular structures, so that cells subserving special purposes become distinct from the others, and this distinction becomes more and more defined as we go still higher, until finally the specialization of function results in the perfection of each organ for its work, and in the mutual interdependence of the parts which constitute the perfect whole. It is this specialization and adaptation that marks the essential distinction between the simple and the complex forms of life. It is a striking thought that all the functions of the human body have their counterpart in the structureless *amœba*. Yet it is more than a suggestion of fancy, since biology teaches that the development of all forms is a result of the division and the gradual differentiation of simple cells. The changes in the forms of animals, which have been gradually brought about in the struggle for existence, the adaptation to surrounding circumstances and the survival of those best fitted to withstand the conditions about them, have

progressed through unnumbered centuries, until the existing forms of life have become what we find them. As the geologist reads the story of the world's long history on the leaves of solid rock, and there finds the record of its gradual evolution, through sudden catastrophes or the more slow and steady action of other influences still at work, wearing down the mountains and filling seas and valleys, so the embryologist can trace the results of the environments of centuries in the animals of to-day. For all the changes of form which have resulted in the perfect animal as it has slowly developed and been modified by external conditions, have left their records upon the germ, so that all the great features of its past history are revealed in the course of its embryological development. The modifications which were only brought about through the changes of the geologic ages, are again passed through in embryonic life, in the course of hours or days. This potency of life must first be latent in the microscopic germ—the single cell from which all living creatures spring—and while in the beginning these seem to be all alike, while many of them proceed in parallel lines as they develop, yet each one, with a strange certainty, reproduces its parent form.

The biologist no longer directs his efforts to the discovery of the essential nature of life. He may indulge in fruitless speculations, which, as in the most distant past, still possess a fascination, and lend an undefinable charm to the imagination when it is free to overstep the bounds of finite knowledge and conjure up strange fancies of those mysteries which only an infinite mind can comprehend. But in his investigations he recognizes a limit beyond which he can not go. His ultimate aim is not to discover life itself but to learn as much as possible of its manifestations, and to this end he must become familiar with the primal forms of living matter from which have grown the living world as we see it now.

The life-force endows matter with potentiality to pass through a definite series of changes until a certain result is attained, beginning with the simplest germ, and producing, as its highest result, the means of its own renewal through successive generations.

BACON AND MICROSCOPE.—The organization of laboratories in which foreign bacon shall be examined is an-

nounced. A school, or rather a course of micrography and helminthology, will be organized, with the aim to create in France an army of inspectors, whose mission shall be to protect us against the invasions of parasites through the most useful aliments. (The editor reviews here, in a sarcastic tone, the trichinosis scare, and quotes the *Marseille Medical*): "From Feb. 24 to May 28, 1881, a special commission, under the direction of M. Marroin, made thirteen examinations, looking over 5,229 specimens of bacon. 24,839 histological preparations were made. Among these 70 were found to contain trichinæ, or an average of $\frac{1}{3}$ per cent. These represented 1,229 barrels, containing hams, salt pork, ribs and steaks. About 9,000 barrels came under the supervision of that commission, giving an average of 0.77 trichinosed barrels in 100; or about 0.031 of trichinosed pieces in a hundred. The examinations made at Havre failed to discover any trichinæ at all.

"We must acknowledge this, that the meat exported from America presents a pretty good appearance, and could not be that of diseased animals, if we pay attention to the quantity of adipose tissue which it contains."

In view of these results, which do not render it possible to affirm in every case the wholesome nature of the meat examined, it seems that England was wise, in abstaining from any coercive measures, adopting the principle that the best preventive of trichinosis consists in a good roasting or boiling of the suspected meat, and this is also a general rule in this country.—*Union Medicale et Scientifique du Nord Est*, Oct.

GLEANINGS.

THE USES OF MALTINE. By J. K. Bauduy, M. D. "In all diseases of general debility, wasting or atrophic affections, and in nearly all varieties of indigestion, maltine is a therapeutic auxiliary, the most valuable I have as yet encountered, and I am daily more and more convinced of its advantages. With the long and very extensive practical experience I have had of its value, I would be at an infinite loss to replace it in my daily practice, now that my confidence in its real merits has been so fully established.

"As a nutritive tonic I use it exclusively in the place of cod liver oil, and alone or in emulsion with the latter, I deem it a most important and useful therapeutic agent in pulmonary affections, and, as I have said before, in neuralgia, epileptiform complications, many varieties of paralysis, chronic and numerous other neurotic affections, I have found it a most important adjunct when combined with the standard remedies usually administered in such cases.

"In many perversions of nutrition, such as the atonic and nervous varieties of dyspepsia, maltine has a most happy effect, correcting functional gastric disturbance, improving digestion, promoting assimilation and *rapidly increasing bodily weight*."—*St. Louis Medical and Surgical Journal*.

IODIDE OF POTASSIUM IN SMALL DOSES.—Although it is the fashion at present to prescribe large doses of iodide of potassium in syphilis, with the view of obtaining rapid and permanent results, there are a number of hospital physicians and surgeons who still believe in the efficacy of small doses of this drug in that and other diseases in which it is employed. Professor A. Clark, for instance, rarely, if ever, administers the salt in doses exceeding ten grains three times daily, while other physicians are content with half that amount.

A fact worthy of consideration in this connection is that the smaller doses have a marked effect upon those patients who, by the previous use of tonics, are in a good receptive condition for any of the powerful eliminatives. More, in fact, appears to be due to the good condition of the patient at the time than the size of the dose administered. If there is a good, solid constitutional foundation to work upon, the utmost reliance can be placed upon small doses of any medicine. This seems to be pre-eminently the case with iodide of potassium.

PUERPERAL MAMMARY INFLAMMATION.—In a recent number of the *Western Medical Reporter*, Dr. Hiram Corson, of Conshohocken, Pa., says that he has for twenty-six years faithfully used poultices, liniments, washes, plasters, etc., in puerperal mammary inflammation, with indifferent success, many cases resulting in suppuration. He has abandoned all such treatment, and for more than twenty-five years has "never failed to give great comfort to the patient, and prevent the formation of pus where it had

not occurred," by the application of ice. "Because pus can not be formed in the breast without the temperature of the part be a few degrees above the normal standard." He puts some pounded ice or lumps of it into a bladder, adding sufficient water to make a water-cushion. One or two thicknesses of old muslin previously dipped in cold water are laid on the breast and over that the ice-bladder. The heat rapidly diminishes, and the cure is speedily effected in every case when freely and persistently applied under. A long adhesive strap may be applied under the breast, its ends passing over the shoulders and secured to the back, not for compression, but for suspension.

ON INFLUENCE OF HYDROCHLORATE OF QUININE ON MALARIAL GERMS.—By Dr. Ceci, Cerino. Dr. Ceci gave an account of experimental researches, made in the laboratory of Professor Klebs, of Prague, on the influence exerted by quinine hydrochlorate on the development of germs contained in malarial soils. A cultivation-liquid of a 5 per cent. solution of isinglass was employed, infected from different sources, and in every case it was found that the presence of very minute proportions of this salt exercised a remarkable power in preventing or checking the development of the *schizomycetes*. One part in 800 was sufficient to prevent any development of germs. The *bacilli malarie* made their appearance very seldom in the cultivation-liquids, even when the proportion of quinine was very insignificant.—*The British Medical Journal*.

LIQUID PEPSIN A SOLVENT FOR DIPHTHERIC MEMBRANE.—In the *Lancet* of October 22, 1881, Dr. W. Hale White says that, having tried the various solvents for diphtheritic membrane usually recommended, and finding them useless, he resorted to the acid glycerite of pepsin with encouraging results. The pepsin was warmed to 110° before use, and then sprayed into the throat so as to act not only upon the large pieces of membrane lining the trachea and larger bronchi, but also that in the smaller tubes. Any one can convince himself of the power of liq. pepsin as a solvent for the membrane by putting a piece in a test-tube with that fluid and maintaining it at a temperature of 100° to 110° F.; it is digested rapidly. *Post-mortems* show no signs that the pepsin affected the healthy lungs or air-passages.

RINGER ON INFLUENCE OF AMMONIA IN CHLOROFORM POISONING.—Dr. Sidney Ringer, in a paper published in the *Practitioner*, June, 1881, p. 437, shows by experiments, the rapid influence ammonia exerted in a frog's heart, whose action had been arrested by an overdose of chloroform. The chloroform evidently paralyzes the heart's muscular substance, affecting the ganglionless and nerveless portion of the ventricle exactly in the same way as any other part of it. [In the *Medical Times and Gazette*, May, 1871, p. 616, Dr. Neild reports a case of apparent death from chloroform inhalation, which recovered from the alarming state of syncope after four half-drachm injections of liquor ammoniæ into the median cephalic vein.

DIABETES INSIPIDUS TREATED BY ELECTRICITY.—Mr. C. P. B. Clubbe reports the case of a woman, aged thirty-five, who was suffering from diuresis, and in whom iron, nuxvomica, valerian, and bromide of potassium had been used without any marked effect. Faradism over the region of the kidneys was then employed every day for about twenty minutes for about twenty weeks. There was very decided improvement up to the seventh week, when the daily average of fluid passed varied slightly; improvement, however, being constant. Treatment was then stopped, and six months afterward she was no worse, though still passing from six to seven pints of urine daily. —*Med. News*.

BACTERIA.—The classification of various species of this genus of microscopic organisms has led to important results. Much crude speculation has, however, been indulged by microscopists concerning the nature and propagation of these minute bodies. Lister's great humbug has been consigned to the realm of fiction by the discovery, that bacteria develop and thrive in even the strongest solution of carbolic acid. Since the announcements of Keith and Tate of their abandonment of the Lister method, all the world seems agitated and we may yet find that out of all this, much good will come.

Who knows what the great discoveries of M. Pasteur may lead to in the study of pathological processes?

SPONGE-GRAFTING.—Dr. D. J. Hamilton has succeeded in healing old ulcers and other wounds by filling their cavities with pieces of sponge. The sponge is first prepared,

and then rendered septic by steeping in a solution of carbolic acid (1 to 20). The pores become filled with leucocytes and fibrin, the neighboring capillaries project into them in the form of loops, connective tissue is formed and the sponge becomes a part of the living body. The same results follow when it is inserted into the peritoneum and between muscular fibers.—*Ed. Med. Jour., Nov.*

BOOK NOTICES.

A SYSTEM OF SURGERY, THEORETICAL AND PRACTICAL. In Treatises by various Authors. Edited by T. Holmes, M. A. CANTAB, Surgeon and Lecturer on Surgery at St. George's Hospital, etc. First American, from Second English Edition, thoroughly Revised and much Enlarged, by John H. Packard, A. M., M. D., Surgeon to the Episcopal and St. Joseph's Hospital, Philadelphia, assisted by a large Corps of the most eminent American Surgeons. In three Volumes, with many Illustrations. Vol. III. devoted to diseases of the Respiratory Organs, diseases of the Bones, Joints and Muscles, diseases of the Nervous System, Gunshot Wounds, Operative and Minor Surgery, Miscellaneous Subjects. Pp. 1059. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: G. T. Craven & Co.

In the February number of the MEDICAL NEWS we announced the publication of the third and last volume of this great work. It is pre-eminently the most magnificent work upon Surgery that has ever been issued. It has not a competitor, and it will be a long time before it can possibly have.

As we have stated before, it is encyclopedic in its character, only that its subjects are not arranged in alphabetical order. While Mr. T. Holmes is the general editor, he is not the author. There is a very large corps of contributors—the number to the third volume being eighteen—each of the departments of surgery having been treated at length by some one who, by having given more or less special attention to it, was supposed to be particularly competent to treat it.

This work differs from other works upon surgery in that all the various diseases and accidents of surgery are exhaustively treated. Take, for instance, the Department

of Diseases of Bones by T. Holmes, Esq. and revised by Thos. M. Markoe, M. D., beginning on page 119 and ending with page 397. Here we have over 250 large octavo pages, double columns to the page, in brevier type, having many excellent wood-cuts. Even a brief examination shows that everything pertaining to diseases of the bones has been treated as fully and exhaustively as could well be done in a monograph upon the subject. This department forms Part II of the work (there are in the third volume six Parts), comprehending *Simple Inflammation and its Consequences, Constitutional Affections, Non Malignant Tumors of Bone, Hypertrophy and Atrophy of Bone*, etc. The department does not include Fractures.

The work is sold by subscription only, ranging in price, according to binding, from \$15 to \$18 we believe.

Every practitioner should have it.

THE TRANSACTIONS OF THE AMERICAN MEDICAL ASSOCIATION, INSTITUTED 1847. Vol. XXXII. Philadelphia: Printed for the Association. 8vo. Pp. 684. 1881.

We are in receipt of the volume of Transactions as above, receiving them through the politeness of our friend, C. S. Muscroft, Sr., M. D., of this city. They do not make quite so large a book as some of the Transactions of previous years, yet we do not think they are in the least less valuable.

As our readers are aware, the thirty-second annual meeting was held at Richmond, Va., May 3, 4, 5, 6, 1881.

At a future time we hope to make use of the volume for the benefit of our readers. We have now neither time nor space for extended remarks either in regard to the volume before us or the Association as a body.

The profession are greatly indebted to the following permanent officers for most valuable labor in the interests of the Association, and for the excellent manner in which the Transactions are placed before them in book form: Wm. B. Atkinson, M. D., of Philadelphia, Permanent Secretary; Richard J. Dunglison, M. D., of Philadelphia, Treasurer; Wm. Lee, M. D., of Washington, Librarian.

ENGLISH PIRACY OF AMERICAN BOOKS.—It is stated, in the Philadelphia *Medical News*, February 11, that the English, who prate so much about Americans pirating English medical works, are themselves guilty of the same offense.

Ward and Lock, of London, two years ago, published six of the twelve "American Health Primers," under the title of "Long Life Series," with the names of the authors, who are all American, carefully erased from the title pages, while the works themselves were so carefully edited that everything indicative of their American origin was expunged from the text. English authors get the credit of these productions. The attention of the London *Lancet* and other English medical journals has been called to this matter, but they failed to give any response. This silent justification of literary piracy on the one hand, and the fierce denunciations of it on the other, reminds one of the old adage that, in finding fault, it makes all the difference in the world, whose ox is *gored*.

EDITORIAL.

ANNUAL ADDRESS delivered before the American Academy of Medicine, at New York, by Edward T. Caswell, A. M., M. D., President of the Academy:

We are in receipt of a copy of this very interesting address, delivered at the meeting of the *American Academy of Medicine*, September 20th, 1881.

President Caswell explains the purposes of the Academy as follows: "The main object of our Academy is to bring together the educated men in our profession, to unite them to each other for the purposes of friendship and of mutual improvement, for the education of our profession, and so indirectly for the benefit of our race. These benefits and these opportunities are to inure only to those who have had the training of our colleges and universities. * * * We are then committed *ab ovo*, as it were, to the idea that none but college graduates should enter upon the study of our profession."

We have a number of times explained the objects of the Academy, and the qualifications required of its members, so that the readers of the *MEDICAL NEWS* generally are familiar with them. We will, however, restate that the Fellows of the Academy must be alumni of respectable institutions of learning, having received therefrom the degree of Bachelor of Arts or the degree of Master of Arts, as well as the degree of Doctor of Medicine, after a regular course of study, not less than three years.

The purpose is to encourage young men, who have the profession of medicine in view as a calling, to first take a regular collegiate course and graduate, before commencing the study of medicine. By so doing their minds will have become trained and disciplined. In other words, they will have learned how to study, when they come to study medicine. In the last number of the NEWS we demonstrated, that, like other qualifications, to study so as to be able to learn, to store up in the mind new facts and principles well digested and comprehended, training was necessary. No one, unless he has previously obtained some skill by practice, and whose mind has been somewhat disciplined by a course of training to arrange, compare, note differences, classify, etc., can take up a study, as logic, rhetoric, or mathematics, and obtain a knowledge of it. Take a man from the shoemaker's bench, or the blacksmith shop, with no more education than a knowledge of reading or writing, and put him to the study of logic—the proceeding would be ridiculous. And yet, hundreds of just such persons, every year, enter upon the study of medicine, and are graduated as physicians. We are aware that not a few of the most eminent in each of the three learned professions were not students a single day in any college or university, but this fact does not weaken in the least our position that the training and discipline received in attendance upon the regular course of a literary institution is of the utmost importance previous to commencing the study of medicine.

Elihu Burritt, the learned blacksmith, may be quoted as one who attained to much distinction as a learned man, and yet he did not belong to the schoolmen; but Mr. Burritt, while he was compelled to work eight hours a day at the anvil, in order to make a living, studied his books eight hours a day—giving eight hours to sleep. John Hunter, the greatest surgeon that ever lived, was a cabinet-maker until he commenced the study of anatomy with his brother—his education being so very limited, and his manners so uncouth in consequence of his non-association with cultivated people in early life, that his practice, for quite a number of years at the beginning of it, did not afford him a living, and he was compelled to supplement its income by instructing private classes in anatomy. But Hunter had a power of mind possessed by very few men. If he had had the benefit of a thorough colle-

giate education, with how much greater brilliancy would he have shone, and how much greater would have been the contrast between him and other men. Whatever brilliancy and value some stones have they owe to the labor of the artist bestowed upon them, but the rough diamond sparkles and emits brilliant rays before it has been touched by the lapidary, but with what increased luster does it shine when cut into a regular form with reference to the laws of light, and polished.

Other men could be cited who have become distinguished above others in the profession of medicine, who had the benefit, in the way of preliminary education, of nothing more than what was afforded by the village school, and, in some instances, scarcely that, but this fact only proves them to have been men of more than ordinary mental power, who were able not only to compete with, but to excel, others, at a disadvantage. It does not demonstrate, but that, with the advantages of a trained and disciplined mind in addition to their superior intellectual powers, their superiority would not have been rendered far more evident.

We quote from Dr. Caswell in regard to the number of medical students who, previous to their entering upon the study of medicine, had received the degree of A. B. or of A. M.:

"Look at the number of young men that have graduated from our medical colleges in the present year! In round numbers it is something more than 2,500. I have not the means of knowing how many of these had received the benefits of a college course prior to their entering upon their professional studies. In only a few of the catalogues that are within my reach is any clue given. But from these few, representing as they do some of the leading medical schools, we may arrive at an approximate knowledge of this point. I refer now to the degrees of Bachelor of Arts or Master of Arts. I do not include Bachelors of Science, Philosophy, etc. The class in the Harvard Medical School graduated with 60 members, and of these, 32 had received college degrees. At the College of Physicians and Surgeons, in this city, 120 graduated, and of these, 24 had received college degrees. At the University of Pennsylvania, of 115 graduates there were 20 with degrees; and at the Rush Medical College, Chicago, 172 graduated, and but 7 had these distinctions. That is, out of 467 graduates from medical schools in the various parts of the country, but 83, or less than one-fifth, had pursued a college course. If we could obtain complete statistics on this point, I do not believe the fraction would be even as large as that. To my mind there is great ground for encouragement in the fact that in the Harvard School more than half the graduating class were men that had first taken their college degrees; and I believe that in that school the proportion will constantly increase."

We have no doubt that Rush Medical College very correctly exhibits the proportion of those who have received

college degrees to the whole number graduated in Western medical colleges—about one in twenty-five.

The object of the American Academy of Medicine, which has been in existence for several years, and numbers among its members very many of the most distinguished physicians in every part of the country, is not to set off by themselves certain medical gentlemen, and claim for them all the medical learning and ability of the profession, intimating that all outside of its fold are ignoramuses and devoid of skill. While it makes the possession of the degree of A. B. or of A. M. a qualification for membership, yet there is no hesitancy in acknowledging that not a few of the most eminent physicians, under the present circumstances of education in this country, are not members and are not eligible for membership. It is the purpose of the organization that its members labor for a reform in medical education, so that those notoriously unfitted (by want of education and proper culture) for the profession, may be kept out of it by being prevented from becoming students. There need be no fear but that the worthy young man, who has been prevented by circumstances from being the possessor of collegiate honors, will find a way into the profession if he goes about to seek it, whatever may be the requirements for matriculation of the colleges.

But aside from the Academy's affording an organization of educated physicians who are pledged to bring about reform in medical education and elevate the standard of qualifications for graduation in medicine, the very existence of such an association will tend much to stimulate young men, proposing to become physicians, to seek first to graduate at a literary institution, providing that, at no distant period, the Academy should embrace among its members all the distinguished members of the profession who are eligible for membership, and, by all proper means, so increase its influence and the respect for it, both in the profession and the community, that membership of it will be regarded as an evidence of learning—as equivalent to the possession of a degree that is of a higher order than that of M. D.

A number of years ago we heard it suggested that there should be another degree besides that of M. D. to be conferred upon physicians—that of M. D. signifying merely that the possessor had passed through the

prescribed curriculum of a medical college, while the other one should be conferred after a certain period of practice of medicine, and in acknowledgment of possessing certain definite qualifications, which it would be proper for every one to labor for and ask for when he thought he was in possession of those qualifications. There would be then a way of recognizing superiority, which there is not at the present time; and while the ignoramuses and incompetents might continue to obtain the degree of M. D., which would only be evidence of graduation, they would never succeed in obtaining the higher degree which would be proof of qualifications. In course of time the community would understand the meaning of the two degrees, and the more intelligent classes would seek the services of those only who held the higher degree. But since it is probably not feasible to have more than the one degree, it seems to us that membership in the *American Academy of Medicine* could be made equivalent to a degree of the kind we have mentioned, by some modification of its constitution. If the intelligent laity understood that to be a Fellow of the American Academy of Medicine (F. A. A. M.) implied learning and superior qualifications, it would afford a strong stimulus for all seeking to enter the medical profession to secure the qualifications necessary to become a Fellow.

We understand from the address that the Academy is in a flourishing condition—its membership constantly increasing. It holds annual meetings, every second year meeting in New York City. We hope it may soon elect to meet in some city of the West. Already a large number of Western physicians are members, but the number would be largely increased if a meeting was held in their midst.

COMMENCEMENT EXERCISES OF THE MEDICAL COLLEGE OF OHIO.—The Commencement Exercises of the time honored institution, the Medical College of Ohio, was held Wednesday evening, March 1, in Music Hall. There was a large attendance of matriculants, alumni, and friends of the college, to the number of several thousand. Music on the great organ, by Prof. George E. Whiting, alternated the college exercises, which were opened by Prof. W. W. Seely with congratulatory remarks upon the success of the college. The session just ended shows the largest

number of matriculants of any in its history, being 342, and of these 104 have filled all the conditions necessary for graduation. Their names, with the States are as follows:

George S. Adcock, Ky.; Chas. Oscar Allen, O.; John R. Allen, Ky.; Frank M. Anderson, Arthur B. Ancker, O.; W. G. Armstrong, Ky.; James Milton Ayers, O.; J. N. Bartholomew, Marc L. Bond, Ind.; Michael P. Buckley, O.; Albert R. Burton, Ind.; N. E. Bradley, O.; Londus Brannon, Ind.; I. J. Brooks, Ky.; James Byars, Texas; *Frank Caldwell, Galen J. Cline, O.; James W. Coburn, J. Litter, Conn. Ky.; M. F. Cupp, J. W. Crum, Ind.; W. P. Crumbacker, O.; M. Cassius Craig, Ind.; Henry O. Davis, Ky.; J. Alexander Davissou, S. P. Deahofe, John A. Dickey, O.; Wm. Dillon, Ill.; E. F. Everist, O.; Bart Fitzpatrick, Ind.; Alvah W. Grosvenor, James F. Hamsher, O.; Robert L. Harris, Ga.; Romeyn B. Hart, Ind.; Benjamin F. Hatfield, Ind.; Wm. E. Hervey, W. Va.; James L. Henderson, Pa.; Joseph G. Hirona, G. L. Hines, James L. Holden, O.; J. Bernard Houston, W. Va.; J. A. W. Hughey, John W. Hulick, Frank Humphreys, O.; J. Oliver Jenkins, Ky.; J. P. Johnston, Pa.; Frank L. Kinsey, John R. Lancaster, Benjamin F. Lyle, S. A. Marshall, J. F. Maxwell, O.; T. T. Metcalf, Ky.; Edwin W. Mitchell, O.; T. J. Moneyhon, Ky.; D. B. Mory, O.; Arthur S. McDaniel, Texas; Richard McCarthy, Ill.; William C. McCord, Pa.; M. S. McCormack, Ind.; John G. McDougall, H. McElwee, N. T. McTeague, O.; William Neal, Ill.; Charles W. Newland, John Nixon, A. P. Ormsby, Ind.; E. L. Paulding, O.; G. R. Peckinpaugh, Ind.; LeRoy Pence, Christopher L. Pindar, O.; Laban B. Plummer, Ky.; E. H. Pocock, John W. Prendergast, O.; B. Knox Rachford, Ky.; F. A. Roeder, Germany; Charles A. Rollins, John Allen Ronspert, O.; Myron G. Rood, Wis.; John A. Roseberry, O.; Andrew J. Rule, Ky.; Henry Schoenfeld, O.; John C. Sexton, Ind.; John D. Sidebottom, Ky.; John M. Sisler, O.; John S. Smith, Ind.; G. A. Sprecher, O.; James Knox Stewart, Ind.; A. H. Stewart, Ky.; Robt. W. Stewart, O.; W. L. Stephens, Ky.; Henry L. Taylor, Orange H. Thomas, Henry B. Thompson, O.; Robert D. Tilton, Ky.; S. M. Townsend, Ind.; Albert R. Touvelle, Samuel Toman, O.; Thomas W. Tuggle, Ga.; J. T. Wallingford, Ky.; J. P. West, O.; Charles C. Whitsitt, W. Va.; P. M. White, O.; Hamilton H. Wilcox, Minn.

The graduates were called up in sections of twenty-six each, and received their diplomas from the hand of Hon. Flamen Ball, President of the Board of Trustees. Hon. H. C. Whitman, as a Trustee of the college, read a brief address, opening with a eulogy of the institution, that had done its duty by the graduates, and devoted mainly to enjoining upon the class the importance of entertaining high aims in the practice of their profession, of the cultivation of agreeable manners, of neatness in dress, and the avoidance of professional bigotry.

The presentation of Dr. W. W. Seely of the prizes awarded by each professor in his department followed, and each testimonial of merit was followed by the customary enthusiastic applause. The names of the Professors, with their honor men, the gifts, and subjects for excellence in which they were earned, are as follows:

Prof. Forchheimer—Physiology—a microscope; taken by Dr. S. P. Deahofe, Potsdam, O.
Prof. Seely—Ophthalmology—gold medal; taken by Dr. Frank Caldwell, Cincinnati.
Prof. Hyndman—Medical Chemistry—a microscope; taken by Dr. Orange H. Thomas, Findlay, O.

Prof. Conner—Anatomy—gold medal; awarded to Dr. Henry L. Taylor, Cincinnati.
Prof. Nickles—Materia Medica—gold medal; awarded to Dr. Edwin W. Mitchell, Delaware, O.

Prof. Whittaker—Theory and Practice of Medicine—post mortem case of instruments; awarded to Dr. Frank Caldwell, Cincinnati.

Prof. Dawson—for the best bandaging—gold medal; Mr. Lester Taylor, Gallipolis.

Prof. Dawson—for best drawing—gold medal; Dr. J. Oliver Jenkins, Morning View, Ky.

Prof. Dawson—for best dissection—gold medal; Dr. Hamilton H. Wilcox, Glenville, Minn.

Prof. Reamy—Obstetrics—gold medal; awarded to Dr. Christopher L. Pindar, Dayton, Ky.

Prof. Palmer—Gynecology—case of gynecological instruments; awarded to Dr. Edwin W. Mitchell, Delaware, O.

Prof. Rauschoff—Descriptive Anatomy—gold medal; awarded to Dr. B. Knox Rachford, Alexandria, Ky.

Good Samaritan Hospital internes are: Dr. Edwin Lyttleton Paulding, Piqua, O.; Dr. Joseph G. Hiron, Buford, O.; and Dr. James Nelson Bartholomew, Stockwell, Ind.

Cincinnati Hospital internes are: Walter Christopher, Louis Schwab, Frank Tripp, all of Cincinnati.

Faculty prize—best papers in all departments—gold medal; awarded to Dr. B. Knox Rachford, Alexandria, Ky.

These were succeeded by the customary presentation of a vast number of bouquets by friends of the several graduates.

The honor of delivering the valedictory address fell upon Prof. Jas. G. Hyndmann, M. D., who treated in a very practical and efficient manner the question of the division of the science and practice of medicine among specialists, holding that with the growth of medical information specialists have become a necessity, and that the tendency, especially in cities, must continue to be in the direction of greater division.

MORAL (AFFECTIVE) INSANITY.—We have received from the author, Dr. C. H. Hughes, of St. Louis, a pamphlet of several pages devoted to the discussion of this subject. Dr. Hughes, of course, is a believer in MORAL INSANITY, *i. e.*, in a perversion of the affective faculties or moral feelings independent of any affection of the intellect; and he certainly is quite successful in advocating his views.

Believing that our readers would be interested in them, we have thought that we would present a few of his arguments. They are not all new by any means. Many of the facts mentioned have been observed by all close observers, yet the evidences employed of the existence of disordered feelings are stated in quite a convincing and interesting manner. In speaking of kleptomania, pyromania, dipsomania, homicidal and suicidal impulses, and the morbid displays of pregnant women, and the mind disorders connected with the critical periods of woman's life, he says: "It is conceded that they may have their starting point in uterine disorder, even with more unanimity and certainty than puerperal mania, for the latter is often as much an insanity of general hemic and neuric exhaustion—aneuria and shock—as of reflex irritation. And, if reflex insanity be conceded, the possibility of moral insanity must be admitted, for the concession acknowledges the varying shades of mental involvement,

depending upon the degree and source of the reflected irritation, from the insane longings and freaks of pregnancy to the infanticidal and other morbid impulses of *post partum* cerebraesthesia. To concede the possibility of a homicidal or other morbid impulse not founded in delusion (and psychiatry furnishes abundant proofs of such impulses), is to admit the basis fact of moral insanity as it is clinically observable, namely, insanity not the *result* of reason perverted by disease."

The reasoning of the author is certainly very plausible. Every physician acknowledges the fact that pregnant women, now and then, will exhibit a moral perversity entirely foreign to their nature when not *enceinte*. Ladies of the most undoubted integrity have been known, when pregnant, to purloin articles not their own. In such instances the condition of the uterus must act in a reflex manner upon the brain, producing a morbid condition of the feelings, without at all disturbing the intellectual faculties; for these persons do not manifest any disturbance of the intellect—their reasoning faculties being intact. If, then, an irritation of the uterus will bring about a reflex insanity, the possibility of moral insanity, as Dr. Hughes says, must be admitted.

The Doctor, in a foot-note, proceeds to mention the fact that Tilt saw a case where pressure upon an inflamed ovary excited epileptic fits. He says he has seen himself a vaginal injection cause a maniacal paroxysm, some of the injected fluid having passed up into the uterine cavity. Sir Benjamin Brodie brought on a fit of chorea by gentle pressure over the stomach, and the effect of a smart blow in producing faintness is so well known to the prize ring that it is considered foul to hit below the belt. "But these effects," he says, "are not more singular than the irritation of dentition, or worms, or undigested substances in the alimentary canal, causing infantile convulsions, the effect of a fistula in causing melancholia with impulse to suicide, passing away after a successful operation, the many eccentric sources of epilepsy, tetanus, cerebral irritation, etc." To these examples mentioned by Dr. Hughes may be added the well-known depressing influences upon the mind produced by dyspepsia, and other disorders of the stomach. Every one has experienced the irritability of temper and bad humor caused by a temporary indigestion. Chronic indigestion has often produced

the most profound melancholia; and many an individual has been led to take his own life, who would never have thought of committing violence upon himself if digestion had been normal.

The author very correctly remarks: "The emotions and the intellect are not twin born, though they mutually influence each other. They do not always go hand in hand, or dwell harmoniously together, though tenanted together in the brain. In good cerebral organizations they are often at war with each other. The things which even sane men ought not to do, they often do; and those they ought to do they sometimes do not."

"The Apostle Paul," he says, "confesses this of himself. If a Saint can concede this much of a healthy mind, a sinner can do no less for the victim of disease. Paul was a good psychologist, and discerned, though unconscious of their physiological foundation, the ganglionic source of certain encephalic states. He was 'constantly at war with his members.' When he 'would do good, evil was present with him.'"

The Essayist says that men in their sanest states are often more influenced by their feelings, prejudices, and passions than by their judgments. We feel ourselves that the observations of every one will, at least, to some extent, confirm the correctness of the statement. With some men it will be previously known that they will act in a certain way under particular circumstances, and that other men, under the same circumstances, will act in quite another way—sometimes diametrically different—yet both parties, in both of the instances, will protest against imputing their actions to feeling. But how can it be otherwise than that the affective faculties have governed in one or both of the cases? for, if reason alone controlled, the results would have been the same. Conduct under particular circumstances, founded upon reason, can not take one course one day and another course on another day with the same person, nor can it vary with different persons.

The feelings are so generally acknowledged to influence the conduct unconsciously, that the law declares a man to be incompetent to serve as a juror in a suit if he has before learned anything about it, or if he be a most distant relative of, or has had at any time any business connection with, either of the contestants. "The restlessness and

constant muscular activity of many lunatics," says Dr. Hughes (We witness the same phenomenon in many sane persons. Some persons are remarkable for not being able to be quiet a moment as regards muscular movement), is not always the expression of disordered intellection, so much as it is an accompaniment simply of morbid feeling, or irritation of psychomotor centers, and sometimes the acts of the insane, if their after confessions in seemingly lucid intervals may be taken as even approximately true, are not unfrequently independent of both conscious thought and feeling."

We will close our article by another quotation from Dr. Hughes' pamphlet:

"To assert that the doctrine of moral insanity is a dangerous one, from which society may suffer, as Mayo and his followers have done, is to render science subservient to social polity, illogical, cowardly and, of course, unscientific, whereas social polity should be ever subservient to scientific truth, whatever that may be revealed to be. Let us always speak according to our convictions. If we trim and prune truth so that we may adapt it to social expediency, we become false lights—we degrade science, the scepter of influence falls from us, and judicial wrongs, even murder perpetrated by strong-handed Law upon the weak and miserable, will continue to be committed in our name, and be the lasting monument of our disgraceful surrender of truth.

"There is moral perversion and degeneration resulting from disease, with but little, if any, appreciable intellectual lesion, less intellectual lesion oftentimes than we find in those whose lives have been given up to vice, through self-will or parental coercion or evil communication. Then let us, when occasion demands, tell the courts so, and not say we can not conceive it possible for moral derangement to exist without concomitant intellectual aberration while observable facts confute such theories, and let us turn our attention to searching out, for the aid of jurists, instead of ignoring, the line of demarkation between responsible and irresponsible vice; the characteristics of disease on the one hand, and on the other, voluntary moral depravity coupled with a body sound and a mind free to choose.

"Moral insanity constitutes an observed and observable

fact of psychology; let us not seek to theorize it out of existence."

THE POISON OF SALIVA.—Some exceedingly interesting and important results have followed the study of the poisonous alkaloids which are developed in the animal organism after death, and no less curious, and, probably, no less important, discoveries have recently been made in regard to the toxic effects of a secretion of the living animal hitherto regarded as innoxious. Dr. Sternberg, of New Orleans, who has, under the direction of the National Board of Health, been engaged in the study of causes and development of epidemic diseases, recently read a paper before the Biographical Society of Washington, on a fatal form of septicæmia in the rabbit, produced by hypodermic injection of human saliva. These experiments indicate that normal human saliva is, when administered in this manner, hardly less fatal than the venom of serpents. Rabbits, so treated, died invariably within forty-eight hours; Guinea pigs are less susceptible than rabbits, dogs resist the poison still more strongly, while fowls escape entirely. The saliva of some people is more venomous than that of others; the general fact seems, however, well established, that this secretion, harmless, when taken into the digestive canal, possesses highly toxic properties when introduced directly into the blood. M. Gautier, a distinguished French savant, has recently published the result of a similar investigation, and this gentleman, who found the salivary secretion intensely poisonous to birds as well as animals, came to the conclusion that the saliva of the human being was similar in its action to the venom of the cobra, the symptoms, both as respects the period of coma, excitation, convulsions and tetanic contraction, following in the same sequence.

A further confirmation of this is afforded by the studies of M. Lacerda, of Brazil, just communicated to the Biological Society, who has discovered that the venom of certain poisonous serpents possesses the power of digesting albuminous substances and emulsifying fats, leading to the conclusion that its primary office is strictly analogous to that of the saliva, and it has long been known that the venomous secretion of various snakes could be swallowed with impunity. Dr. Sternberg inferred that the poison of saliva is due to bacteria, but M. M. Lacerda

and Gautier arrive at a different conclusion. Both the latter ascertained that its toxic principle was not destroyed by heating to a point that would destroy these organisms, and the former showed that saliva, when allowed to become bacterial, developed different symptoms from the fluid when free from them, and the latter excludes from its deportment with reagents that the poisonous principle belongs to the ptomaines.

THE PRACTICE OF MEDICINE; A BUSINESS OR CHARITY?—The article of Dr. E. H. Cobleigh entitled as above seems to have attracted a very great deal of attention everywhere. The *New England Medical Monthly* speaks of it as the best article on the subject it treats, it has ever met. Besides, we have received letters from all over the country commending it.

Every sensible physician must agree with the author that it is high time the practice of medicine should be conducted on business principles, as is the case with other business. To do so, there must be done away the twaddle and nonsense mentioned by Dr. C., of "our noble calling," "our mission of charity," and such like cant and sentimentality, and announce that we practice medicine for the money return, the same as a lawyer practices law or a preacher preaches (the clergy are now receiving six and eight thousand dollars a year in cities) for financial profit, and the banker and merchant conduct their business for lucre. A man who contracts a debt for furniture, dry goods, or groceries regards it quite in place to be served with a bill for the same, but not a few when handed a bill for medical services have their disgust excited. They think a physician is not much devoted to his profession, has not much professional dignity in him, is poorly impressed with the nobleness of his calling, who duns people for money.

Physicians themselves are much to blame for this state of affairs; and it behooves them to address themselves to bringing about a reform. We really hope that Dr. Cobleigh's article will make a beginning for reformation. We are happy to announce that he designs to supplement the article by another one soon.

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ORIGINAL CONTRIBUTIONS.

Reflex Neuroses from Irritation of the External Auditory Canal.

BY W. R. AMICK, M. D. CINCINNATI, OHIO.

THE term reflex is used in different ways, and is frequently called into requisition when we are dealing with an obscure case. It serves the double purpose of giving a plausible explanation to the phenomenon that is produced in certain cases, as well as to satisfy the patient that the physician knows the nature of the malady with which he is afflicted. We frequently see cases in which the cause is located in one place, and the effect in another. By empiricism we are enabled frequently to recognize this fact. To give an explanation of the manner in which the afferent nerves carry the impression from the point of irritation to the nerve center, and the efferent or reflex spinal nerves convey or refer the result to another portion of the body, is not an easy task. Apparently this action does not appear to be governed by a fixed principle, and the irritation that produces one set of symptoms in a given case, may produce a different action in another. For instance, a disease or an obstruction of the external auditory canal may produce a fit of sneezing in one person, vomiting in another, and upon the third the effect will be nil.

Reflex action plays a very important part in the higher forms of development. It can properly be applied to anything that may cause a generation of nerve force which develops as a consequence of an impression re-

ceived by a nerve-center. The movements of the iris, the action of the lungs, heart, stomach, intestines, etc., are reflex. The special senses are called into requisition by impressions made upon them, and their actions are reflex. Even the actions of the mind are supposed to be reflex, depending upon some external agent for the excitant. These are termed normal or physiological reflex actions. The forms that we will refer to in this article are abnormal, and are due to a pathological condition, or the presence of some obstruction causing irritation.

A few months previously I was consulted by a physician for deafness. An examination showed that both external auditory canals were filled with cerumen. As soon as the ear speculum was inserted into the canal, he was seized with a fit of sneezing. This occurred as often as the speculum was brought into requisition. An effort was made to remove the plug with the syringe, but on account of the size and firmness of the mass, this could not be accomplished. The angular forceps were then used, but whenever they touched the side of the canal, the sneezing recurred. Previous to this time he was not aware that simply touching the integumentary lining of the canal would produce any reflex consequences. There was no pain produced, but the terminal filaments of the afferent nerves were in a hyper-sensitive condition from the continued pressure and consequent irritation; and the light touch of the speculum or forceps produced a sufficient impression to cause the diaphragmatic spasms. Why the reflex impression should be referred to the diaphragm, rather than the pharynx or stomach, is a question that has not been definitely settled.

In another case, also a physician, whose deafness was caused by an excessive accumulation of cerumen, the same train of symptoms were observed. He was aware of the effect that would be produced when anything touched the lining membrane of the canals. This case was auto-sensitive, and the spasms would be produced by touching the part with his own finger.

There are a number of cases on record where a cough has been caused by some irritation in the external auditory canals. It may be produced by some foreign body in the canal, and is generally of the species known as dry cough. In such cases, when the obstruction is removed, the cough ceases. Sometimes the presence of pus, or

diffuse inflammation of the external ear, is the cause of an ear cough.

Pechlin considered that ear-cough arising from irritation of the external auditory canal as a common occurrence, but mentions as a rare case, showing the peculiar reflex sympathy between the ear and the stomach, the case of a military officer who vomited freely when his sensitive canals were touched even with the finger (Burnett).

There is no doubt but that irritation of the external ear is produced in children during the period of dentition. In such cases I think the irritation is conveyed to the ear by the tempo-auricular branch. I do not consider that it is an irritation along the course of some of the branches of the inferior maxillary and the pain then referred to the ear, as in some cases of morbus coxarius where the inflammatory action reaches the articular branch of the obturator nerve, and the pain is referred to its peripheral distribution at the knee, but the impression is carried to the brain, and then reflected to the ear on account of juxtaposition of the terminal filaments and cells in the central ganglia.

Epileptiform symptoms are sometimes developed by the irritation produced from the presence of a foreign body in the ear. It would probably be as good policy to examine the ear in a disease of an epileptoid nature, as the eye. If epilepsy has its seat in the medulla oblongata, and is caused by an irritation of some of the afferent nerves that refer to this portion of the nervous system for their controlling force, then it is not assuming an impossibility to say that a foreign body in the ear might be the cause.

About two years ago Mrs. E—— presented herself for treatment of the ears. She complained of a disagreeable sensation as if the ears were stopped up. There was considerable irritation and itching, and she was in the habit of picking the ears with a hairpin. Her voice was greatly changed and she spoke in a thick hoarse tone. She had noticed that the degree of hoarseness depended upon the condition of her ears. When she experienced but slight trouble with the latter, then her voice would become natural or nearly so, but when the ears would itch and she would pick them, in a short time she would be so hoarse that she could scarcely speak above a coarse whisper. An examination revealed cerumen covering the

lining membrane and almost closing the canals. When this had been removed the epithelial layer looked like it had been macerated, and was taken out in large flakes. Following this there was an immediate improvement in both the hearing and the voice. About four months ago she presented herself with a similar condition existing. She complained not only of hoarseness, but of an obstruction in the throat. After the vocal organs had been kept quiet for a while the voice would be nearly normal for a few moments, but if conversation was continued for a short time, the tone would become thick and dull and speaking required an exertion. This condition of affairs was peculiarly unpleasant to her as she wished to take lessons in vocal music, and vocalization was impossible. She stated with positiveness that there was a small tumor in the larynx, and whenever she began speaking or attempted to sing, the enlargement would be crowded or pushed against the vocal cords and obstruct phonation. Upon different occasions she insisted that the tumor interfered more when she attempted vocalization than the hoarseness, for the former prevented it while the latter only changed the pitch and called for increased exertion. Examination of the ears revealed cerumen, and, when this had been removed, the loosened epidermal scales as in the first instance. After they had been removed she instantly remarked the improvement in her speech. The inferior portion of the canals presented an eczematous condition. When she presented herself four days subsequently, there was considerable redness with some thickening and induration of the integument at this point, together with considerable itching. The discharge had dried and the inflamed portion of the right ear was covered with crusts. It was very sensitive and bled when touched with the probe or forceps. The inflammation was confined to the inferior portions of both canals, so that we had to deal with a circumscribed eczema squamosa as the cause of the irritation. The amount of cophosis was not very pronounced, but the peculiar unpleasant stopped up or stuffed sensation, as she expressed it, together with the itching and the annoying laryngeal trouble, were the disagreeable symptoms.

The hoarseness that disappeared so quickly when the obstruction was removed, had returned with the increased infiltration and inflammation of this part, but it was not

so marked. The condition of the ears could be determined by the voice. As the thickening and induration lessened, the voice became clearer, and there was less exertion required in speaking.

Laryngoscopic examination revealed a normal condition of the epiglottis, vocal cords etc. Careful search at different times produced negative results. She was so certain that she could feel the tumor that I thought probably there was a small nodule or enlargement at some point, and that I had failed to discover it. As there was no tumefaction or undue redness or congestion of the parts that could be seen, or any obstruction to respiration, I came to the conclusion that it was purely a reflex sensation, and that as the eczematous condition of the ears improved, this unpleasant sensation would disappear. This supposition proved to be correct, and as the thickening and induration gradually yielded to treatment, the hoarseness and tumor(?) gradually disappeared. In her own words, "The tumor appeared to dissolve and gradually pass away."

The question now arises; how can an irritation of the external auditory canal affect the organs of speech? We will offer our explanation of the method in which this reflex action is produced. The lining membrane of the canal is supplied with nerves from the vagus and the fifth pair. An irritation of this portion of the ear may be transmitted to the central ganglia by either nerve. If there is a general commingling of the peripheral distribution of these nerves in the canal, then it would be a very difficult matter to say which one transmitted the irritative force, the central terminations being equal. If however the terminations in the central ganglia are different in regard to locality, then that difference must be taken into consideration. We do not know what process takes place in the brain when an impression is received from an afferent nerve. We are aware of the fact that the impression is received, and that its presence generates a certain amount of nerve force that is sent out through the efferent nerves. We do not know what that force is developed from; at the expense of what material, or the manner in which the proper efferent nerves are selected to carry it to its destination. If the ultimate nerve fibres are continuous throughout, and this appears to be definitely settled by anatomists, that we might suppose that the efferent nerve

fibres are situated in close proximity to the ultimate terminations of the afferent ones in the central ganglia, then when nerve force is developed through the agency of an irritative impression brought in by an afferent nerve, the former, together with the attending cells, would be, so to speak, surrounded by this newly generated force, and the terminal filaments of the afferent nerves, being connected with the same cells, would receive and carry it away, the effect becoming manifest at the peripheral distribution. Then we would say that the irritation, in this case, was conveyed to the brain by means of the vagus nerve, rather than through the Fifth pair, for the following reasons: (1) The laryngeal nerves are branches of the pneumogastric, and their fibres enter into and form a part of that nerve from its origin to the point of bifurcation when they continue on to their distribution in a separate sheath. They arise in common with the fibres of the pneumogastric at its deep origin, as they are then a part of it. (2) Some of the afferent fibres of the pneumogastric that have their peripheral distribution in the external auditory canal, arise in common with some of the fibres of the efferent portion of the same nerve that are distributed in the larynx. (3) Then assuming this theory to be correct, we can readily see how an irritation of the external auditory canal, may create a nerve force that will become manifested in the larynx. The reflex influence in this case was revealed in the hoarseness and the peculiar sensation as if there was a tumor in the larynx. The proof that it was a reflex action is the fact that when there was a change in the condition of the ear, there was a corresponding change in the larynx. And still further, when the irritation (the cause) was removed, the manifestations (the effect) in the throat disappeared.

Tri-State Medical Society.

PUERPERAL PERITONITIS.

DR. J. A. IRELAND of Louisville.—Mr. President and gentlemen of the Tri-State Society. I am unexpectedly called upon to open this discussion. I have had no time in which to make any especial preparations; for this reason I will ask only a few minutes to make the opening re-

marks. What do we understand by puerperal peritonitis? We have a great variety of opinions expressed with regard to puerperal fever or peritonitis for indeed we have few cases of puerperal fever without puerperal peritonitis. Some authors are decidedly of the opinion that we have a specific disease known as puerperal fever, whilst others are equally positive that we have no specific disease, every so-called case of puerperal fever is really one of septicæmia, accompanied very often by cellulitis, peritonitis etc. In the books we have beautiful descriptions of pelvic cellulitis and pelvic peritonitis. I think, however, that upon making a post-mortem examination you will scarcely ever see a case of pure pelvic peritonitis. Along with this we have what is called puerperal fever; this name is a very unfortunate one as it doesn't signify anything with regard to the pathology of the disease.

I would like to hear an expression of opinion with regard to the communicability of the disease. I say this because I know there is a vast difference of opinion with regard to the contagiousness and infectiousness of the disease. These two terms have been so blended that they have been made to mean almost everything, so that I prefer the name or rather word "communicability." At one time the almost universal opinion all over this country was that this disease was not communicable—physicians all over the country took this ground. Dr. Tyler Smith went so far as to say that if a physician visited a patient, who had puerperal fever, the poison would settle in his clothing, in his head, in his nails etc., and upon his visiting another patient would communicate the disease to her. For this he (Dr. S) adopted a very careful course of bathing, and disinfecting of his person and clothes after visiting a patient with puerperal fever before he visited another patient in the puerperal state. Dr. Meigs taught that puerperal fever was communicable. I have not had as much practice in this disease as some others, but so far as my experience goes, I have no more doubt that the genuine puerperal fever, so-called, is a communicable disease than I have of my own existence. There are men in the profession and some in the city in which I live, who hold that the doctrine of the communicability of this disease is nonsensical. If the disease is not communicable why do we sometimes find it traveling with and following the track of one particular member of the profession all

through a community while other gentlemen who are practicing in the same neighborhood, delivering children without any occurrence of the disease in their patients? Dr. Horner of our city, not long since told me that when he was a boy and lived in Philadelphia he remembers distinctly, that Dr. Meigs locked up his house and went to the country simply because the disease was following him all around the city of Philadelphia. I have seen similar instances in the country where I live. I have known a physician to deliver a woman who afterward got puerperal fever; he visited case after case in the community and carried the poison from one to the other.

I don't know what relation there may be of this disease to puerperal fever, or erysipelas, scarlatina, or measles, but we know that it is very liable to occur during the prevalence of these diseases; we know that it is more likely to occur during the prevalence of erysipelas, or of scarlet fever than any other time; we know that if a man makes a post-mortem examination of one of these cases and afterwards delivers a woman, she is liable to have puerperal fever.

Dr. Maughs, of St. Louis.—I came in just as Dr. Ireland was concluding his remarks. I may say *in limine* that I cordially agree with him, perhaps, in all that he has said. The communicability of puerperal fever is, however, still a disputed point. The most distinguished men in the profession in the United States—Fordyce Barker and others—united in the opinion that it is a specific disease—a peculiar kind of fever that is *sui generis*. Dr. Meigs refers to cases of puerperal fever where he thinks the disease was communicated by means of the fingers, clothing, etc., of the physician, and thus he concludes that the disease is communicable. But there is a kind of puerperal fever, so-called, that is not infectious, there are some epidemics that are scarcely communicable; thus, a pneumonic disease is scarcely communicable, that is, it is not ordinarily so. It prevails through the country without communication from one patient to another.

Puerperal fever is auto-infectious and hetero-infectious. It is produced in most cases; it is produced as well as aided by putrid discharges, poisons which arise from the epithelium or mucous membrane immediately after the birth of a child. Pieces of epithelium are removed and the blood-vessels being patulous, are ready to absorb the

poisonous matter. The gaping sinuses are ever ready for the introduction of septic matter. It may be a blood clot is taken up and, as it decomposes very readily, is absorbed and a condition is present, that, in the course of time, develops septicæmia. It happens in this way in most cases. They are auto-infectious—produced by auto-infection in many cases. But it must be borne in mind that puerperal septicæmia is infectious and it is so to the last degree. Many physicians are perfectly ignorant of the dangerous character of septicæmia, from its auto-infectious nature and its hetero-infectious nature. The physician goes from a case of erysipelas to his lying-in patient, and communicates the erysipelas to her directly and she dies of puerperal fever. The erysipelas inflammation spreads rapidly and the case is almost hopeless because the puerperal peritonitis almost never results otherwise than fatally. But in their ignorance of the infectious nature of these diseases and of the fact that erysipelas in an individual may be correlated with puerperal fever in the lying-in woman, it has been the habit of some physicians to go directly from a case of erysipelas to the bedside of the lying-in woman. It has been so in a multitude of cases. I think it is wrong. The physician should bear in mind constantly the danger of attending cases of zymotic diseases and then hastening directly to the bedside of the lying-in woman. Erysipelas is correlated with puerperal fever undoubtedly, internal erysipelas and puerperal septicæmia, and puerperal erysipelas is rapidly fatal. Now if a physician has a case of puerperal fever, being ignorant of the communicability of the disease, continues his regular practice, visiting five, ten, or twelve lying-in patients, the probability is that he will carry the disease from one to the other, and an epidemic results. Had he taken the proper precautions, the disease might have been confined to a single case. Physicians should always bear in mind the fact that zymotic diseases are correlated to puerperal fever and thus avoid spreading this disease.

During the prevalence of scarlet fever, measles, small-pox and other zymotic diseases, but especially of scarlet fever and diphtheria, the danger should be borne in mind.

An infection which in the ordinary individual would produce scarlet fever, in the puerpera would be probably puerperal septicæmia. And so with erysipelas; what,

communicated in any other manner, would be erysipelas, communicated by absorption of morbid matter from the vagina—the zymotic matter entering directly into the circulating fluid of the womb,—becomes puerperal septicæmia. This point is universally believed, I think. It is the practice of some physicians to go from a case of erysipelas, walk around the block and go right into the presence of the lying-in woman. They thus carry contagion in their path, of course. If I am attending a case of erysipelas—I don't usually attend such cases—but if I am obliged to attend such a case, I do not attend any obstetric cases. The doctrine was promulgated some time ago by Dr. — that if a physician was attending a case of puerperal fever, making vaginal and uterine injections, and coming constantly in contact with septic matter, before attending any other patient, he should change his clothing, take a warm bath, and use carbolic acid in order to thoroughly disinfect himself. Then he can go to the next case with comparative impunity. In these cases we cannot rely upon medication. The only way to deal with it successfully is to cut off the supply and then the patient may survive the attack. We should resort to disinfectant washes—washing out the uterus thoroughly and keeping it washed out so there is no odorous discharge—none whatever. In that way we at once cut off the supply and give the patient the best possible chance. At the same time the temperature must be watched and regulated so as to keep that from destroying the patient before the poison is eliminated from her system.

Dr. Bauer, of St. Louis.—This subject seems to me to be an intricate one, although it would seem to be exceedingly transparent from the statements we have just heard. The subject is a very intricate one, and we are not yet clear as to the points—we have not yet struck bedrock. But a short while ago we were taught that it was dangerous to touch the peritoneum. We know that we can open the abdominal cavity at any time you please and for any length of time, providing you do not expose the internal cavity long enough to produce anæmia.

You can blow air into the peritoneal cavity with all the germs of bacteria and bacilli as long as you please and it does no harm and is followed by but little inflammation. I have recently read an article from the pen of an Italian gentleman who has made thirty-seven ovariectomies for

various objects, for pelvic cellular abscess, for tubal-pregnancy, etc., and but one patient out of the thirty-seven died, and that patient was doomed to death almost, when he touched her. Thus we have learned from experiments that you can fill the entire abdominal cavity with milk, and in the shortest possible time it will be absorbed and digested by the substance of the body. That is our knowledge now, and how much we may learn yet we don't know. We are just on the threshold, and the questions are not easily disposed of, as we have just heard. That foul material produces septicaemia is, I think, a well-established fact. It is for the reason that when a surgeon allows this foul material to accumulate in a wound—the germs of these microscopic organisms—he produces septic infection there, that Prof. Lister cautioned us that we must keep the wound exceedingly clean. But Lister goes into details beyond necessity.

Suppose that you take away a piece of peritoneum and clear the sore surfaces where the secretion will necessarily issue, you get the food for the bacteria and bacilli, and they will develop there in the shortest imaginable time. But with regard to peritonitis, it is without any exception, one of the most fatal and destructive diseases that the surgeon can meet with; but we have learned to protect ourselves against that. I have heard a good deal about septic peritonitis, this infectious agent which the gentlemen have just spoken of, and I should like to know how septic peritonitis comes about. Now two ways have been mentioned in which septic peritonitis might originate. One is, that the infectious material is carried into the vagina and into the uterus. Now this may cause inflammation of the uterus itself, but the peritoneum does not participate in it all this time, nor can it. In order to get septic peritonitis I think it is necessary to have the infectious substances developed within the peritoneal cavity. You must get the germs into the peritoneal cavity. But I don't think you will get septic peritonitis by the carrying of the poison into the uterus, for if it pass into the womb it will be absorbed by the veins, and you get septic phlebitis; from septic phlebitis you will get symptoms of peritonitis, but it is not septic peritonitis—none whatever. You get a regular inflammation of the peritoneum, and very often you get all the products of an active peritonitis. I should think this is the explanation

of it. I have had very limited experience in this matter, but my experience and my reading teach me that. Now, gentlemen, what is possible to do with antiseptis, and what we can do in the way of peritoneal surgery, is really wonderful. I performed, about three months, or rather ten weeks ago, an operation to remove a very large tumor which occupied the entire abdominal cavity, pressing the intestines and the abdominal organs into a very small space. I did not have a very accurate diagnosis, and the patient couldn't help me at all. I knew it was a large cyst—a multilocular cyst. I cut into the abdominal cavity, and dealt with facts as I found them, as I preferred this to paracentesis, as I wished to avoid the contact of the amyloid substance of the cyst coming in contact with the peritoneum; therefore, I did not choose to make the puncture. I took the chances as to what I might find. My patient, a colored woman, knew very little about anything outside of herself, and still less of herself. How this tumor came there she doesn't know. It was there when she first noticed it, and it was then pretty large. She made a good joke of it, and said she thought it might be the cucumbers or potatoes which she had eaten the evening before. Well, I did not know whether it was an ovarian cyst, or whether it was fibrocystic tumor originating in some other part of the pelvic cavity, but I was prepared to deal with it as I found it. I opened the cavity, and punctured a large cyst, which happened to be multilocular. We found that a number of fibrillæ right in the center of the cyst went down and connected with the uterus, and it was surrounded with a great deal of indurated material, such as we find in these tumors. I was surprised now to find that the lateral ligaments had been raised up with the peritoneum almost midway on the tumor. In order to remove the tumor, it was necessary either to take out a piece of the uterus, or else leave a piece of the tumor; I chose the latter. I took out both the lateral ligaments. I used the thermo-cautery to cut off the lateral ligaments, then I took out the tumor, leaving a slight cap remaining as it were. I then charred all over it with a hot iron, and closed the abdomen. I expected no less than death in this case, but the woman got well, and she was returned to her home in seventeen or eighteen days.

Now, gentlemen, who could have done that twenty

years ago, or even ten years ago, and have had success in such an operation? No man was more surprised than I was. The patient, on the other hand, was not at all surprised; she expected to get well. But the doctor expected her to die, and was greatly disappointed, and most agreeably so. We are not yet fully acquainted with the best antiseptic means, gentlemen. It isn't but a very short while since every surgeon used carbolic acid for everything. In the last meeting of the International Medical Congress, Mr. Keith said, right in the presence of Mr. Lister, that he had to give up the use of carbolic acid in his last Battey's cases. He lost all of them by carbolic acid if he used it strong, and if he dilutes it too much, it is of no use—it doesn't kill the germs, and these microscopic organisms are developed in that locality. But, gentlemen, I know that they will live in it, they remain alive, and remain capable of developing in the carbolic acid. Gentlemen may prevent suppuration and septicæmia by its use, but when it is once established, it takes its course, and you can do nothing with it. But why are we not furnished with statistics by Mr. Lister? I happen to have performed quite a number of operations of amputation of the thigh, which, as you are aware, are of a very dangerous character. The percentage of death in this operation is very considerable, yet I succeeded without carbolic acid, and lost but ten per cent. of some fifty cases. I lost only five cases out of fifty-five. Lister lost in about the same number, fifteen cases, and of this number, six amputations were minor amputations. So that when I compare my statistics and the results of my amputations with those of Lister, I find I have done better without carbolic acid, than he has done with it. What did I do, gentlemen, with my amputations? I took good care from the first. I made it an especial point, first and foremost, to arrest the bleeding, and I made the flat operation and smaller than the circular operation. I have taken great care to ligate every vessel that was large enough to ligate, so that I should have no further trouble, when once I had closed the wound it should not be rendered septic again. After that, I close the flaps very gently, and lightly apply my sutures, and put the limb in a cotton pad. I bandaged the limb, and after that put on oiled silk. That is my whole treatment, gentlemen; I do nothing else. Prof. Porter, some 25 or 30 years ago,

advocated this treatment, and, therefore, I can't claim any originality.

He said, very correctly, nature heals wounds. You require no adhesive straps. You don't require a circular bandage; on the contrary, both of these remedies interfere with the healing process. He advises that the arteries be ligated. The surgeons present at the International Congress declaimed very bitterly against Mr. Lister because he didn't come round with his statistics. He made speeches, but he doesn't say what he has done. My honest belief is, he is afraid to publish his statistics. So, too, with antiseptic washes. I think if you keep the wounds properly cleaned you will have no trouble. Your antiseptic lotions do no more than wash off the germs—those microscopic organisms. Clean water will do the very same thing, and I use nothing else but clean water on my amputations, and I think they have given me better results.

Now take the spray. Well, gentlemen, you know we couldn't live without the antiseptic spray. Now, the spray is colder than the atmosphere, and when you spray the abdominal cavity, especially in the portion by the peritoneum, you take away the heat; you reduce the temperature, which is absolutely necessary for the prolongation of life. That is not all. The air is filled with minute organisms, and your spray washes them into the wound—collects them and washes them into the wound. That is the reason that Bilroth and other European surgeons dispensed with the spray. I say the spray can not do any good, and it is likely to do a great deal of harm. I believe the best antiseptic remedies we possess are cleanliness and water.

Dr. Schenck, of St. Louis.—Mr. President, I came here this evening for the purpose of being a listener; but it is very difficult to be quiet when a subject of this kind is under discussion. It is a subject in which every one is interested. Not only the profession, but the laymen; not only the laymen, but the layman's wife; not only yourself, but your children. And, gentlemen, there is no subject in medicine that I know of that has called forth more medical literature than puerperal fever. Dr. Barker, several years ago, gave the number of communications and contributions that had been written on this subject; and a year afterward, he said, he had not gotten one-

quarter of them. Gentlemen, this is the hydra-headed monster of the lying-in room. The people of England, desiring to get at some certainty in regard to the communicability of this disease, called together a meeting at the Medical Congress and discussed it, and by special invitation sent over to this country for Dr. Fordyce Barker to represent us, and when they met they discussed this matter, and requested all physicians to report peculiar circumstances in such cases. Gentlemen, the profession is ignorant on this point. I remember when I first went into the profession, I thought that every woman in the puerperal condition had puerperal fever, and it frightened me.

Gentlemen, we call peri-cervitis and peri-metritis puerperal fever. And so we call a great many things puerperal fever which are not. I tell you there is a disease such as puerperal fever. Now, some gentlemen say it is septicæmia. There is putrid matter in the womb. There is a disease of that kind. The patient has quick pulse, high fever and pains; on examination of the womb you find some putrid matters; you give an injection, and down comes the pulse, down comes the temperature. This is septicæmia; call it septic peritonitis if you please. Account for it as you will, it is there. But this is a different disease from what you will find when you have puerperal fever. I am not free from it. Any one is liable. But what surgeon will tell you he ever saw septicæmia running through a country? Who ever heard of septicæmia becoming an epidemic? But septicæmia is not puerperal fever. Call it what you will. Call it septicæmia if you please. It is a distinct affection from puerperal fever. I have charge of a lying-in institution here, and I remember very well when I first took charge of it, I was frightened at every case of septicæmia, every case of blood-poisoning. I was expecting puerperal fever in everything, and I knew it when it did come. It went through my wards like measles go through an orphan asylum. Our institution did not lack cleanliness, but this disease went through the house like the measles goes through a family of children who have never had it. There is no use in cleaning things, it does no good. Don't say your patient has puerperal fever because she has had a child. You can do as you like, gentlemen; cleanliness is near to Godliness. You can wash the womb out when

you have got septicæmia. Let the patient have quietude and rest; but if your patient has puerperal fever, be separated from the rest. I think we should be careful to make a distinction between these diseases—between peritonitis and puerperal fever.

SELECTIONS.

Hydroleine or Hydrated Oil as a Therapeutic Agent in Wasting Diseases.

BY W. H. BENTLEY, M.D., LL.D., VALLEY OAK, KY.

[From *New Remedies*, September, 1881.]

In October, 1880, I read an advertisement of hydroleine in some medical journal. The formula being given, I was somewhat favorably impressed, and procured two pamphlets: one on "The Digestion and Assimilation of Fats in the Human Body," and the other on "The Effects of Hydrated Oil in Consumption and Wasting Diseases." They are ably written, and afforded an interesting study. Their doctrines are so reasonable, that I got up faith enough to have my druggist order a sufficient supply to thoroughly test the merits of the preparation.

I was ready to catch at anything to take the place of cod liver oil. In my hands it has proved an utter and abominable failure in ninety-five per cent. of all my cases in which I have prescribed it since I have been engaged in country practice, and it never benefited more than forty per cent. of my city patients.

The inland people, who seldom eat fish, can rarely digest cod liver oil. Almost every week I am consulted by some victim of the *cod oil mania*, who has swallowed the contents of from one to twenty-five bottles, and who has been growing leaner, paler and weaker all the while, until from a state of only slight indisposition, these patients have become mere "living skeletons." Nearly all complain of rancid eructations, and an unbearable fishy taste in their mouth, from one dose to another. They not only fail to digest the cod oil, but this failure overloads the digestive organs to such an extent that digestion and assimilation of all food becomes an impossibility, the

patient languishes and pines and finally dies of *literal starvation*. In the comparatively small number with whom I have found cod liver oil to agree, it has proved very gratifying in its results. In my practice, by far the largest number receiving benefit from it have been children. Those who have, previous to their illness, been accustomed, to some extent, to a "fish diet," will be more likely to digest the oil, and more notably so in cold climates. Still, the innumerable efforts that have been made in the shape of "pure cod liver oil," "palatable cod liver oil," "cod liver oil with pepsin," "cod liver oil with pancreatin," "cod liver oil emulsions," etc., and so on, *ad infinitum*, attest the fact that the great *desideratum* after all is to render cod liver oil capable of retention by the stomach, and digestible when it is retained.

As hydroleine is partially digested oil, and this partial digestion is brought about by a combination of factors suggested by actual physiological experiments, these facts commend it to my confidence, and a trial of the preparation in seven typical cases convinces me that it possesses a high degree of merit, and I feel that it is a duty incumbent upon me to call the attention of my medical brethren to the subject.

The first case in which I prescribed it was that of a married lady twenty-eight years of age, a blonde, and the mother of four children—the eldest nine and the youngest one year old. From the birth of this last child she dated her illness, for she made a tardy convalescence, remaining unable to walk for a month. Soon after she began to grow weaker, and soon resumed her bed, which she had not left to any extent since, not at any time being able to sit up longer than fifteen or twenty minutes. During all this time she was under charge of a skillful physician. He had tried many remedies to check the rapid emaciation; among these were several different brands of malt extract, cod liver oil, and various mixtures of the oil. None of the oils and their mixtures agreed with her. In March, I was called and prescribed hydroleine, a bottle of which I delivered at the time, directing her to commence with teaspoonful doses, to be gradually increased to twice the amount. It agreed with her finely, and by the time the first bottle was used she was greatly improved. She procured and used two additional bottles, and, at this writing, June 15, is considered well.

The above case was one of general and persisting emaciation, unaccompanied by any cough or perceptible thoracic trouble. The ensuing case was one of diagnosed

TUBERCULAR PHTHISIS.

The patient was a married lady, æt. thirty-two, had been married about fourteen years, and was the mother of six children, the youngest two years of age. Several of her sisters had died of the above-mentioned disease. Her medical adviser prescribed cod liver oil, and she had taken a full dozen bottles with plenty of whisky. The oil had not been digested, although it had been retained by the stomach. Her cough had grown constantly worse, and she grew rapidly weaker, week by week. I prescribed hydroleine for her, and she commenced to take it in April, about the fifteenth. It agreed with her finely. She rapidly gained weight and strength, her cough was relieved and has now nearly ceased. She has used nearly four bottles, and continues to use it, though apparently well.

I have prescribed it in three other cases, in two of which the results have been equally gratifying, but in the other case it produced nausea and greasy eructations.

From these trials I am led to think quite favorably of the hydrated oil, and I am led to believe that although it may not agree with all, it will be found of great and permanent benefit to a very large per cent. of consumption and other "wasting" diseases, and that it is destined, at no distant day, to very largely supplant the undigested oils.

Treatment of Acute Rheumatism by the Salicylates.

BY DONALD W. C. HOOD, M. D.

An Analysis of 1,200 Cases.

My figures deal with about 1,200 cases treated at Guy's Hospital by different physicians. They relate exclusively to acute sthenic rheumatism, occurring in patients under thirty-five. I think this reservation an important one, the clinical history of acute rheumatism becoming more varied and complex after this period. The cases are taken consecutively from the clinical records preserved at the hospital. I have arranged my figures and facts

under, first, a table in which 350 cases are placed in a form parallel to that published in the *Lancet*; Dr. Fagge's cases being those under the salicylate treatment, whereas mine have been treated by various remedies not salicylate. This table shows the day upon which patients lost their pain and fever, reckoned from commencement of treatment. It has appended the average duration of illness before admission, and also the average time patients remained in hospital. For convenience of comparison, especially with regard to the length of stay in hospital—which point Dr. Fagge's table does not touch upon—I have taken from my own series 350 cases in which the salicylates were used, and I have treated these cases upon the same basis of arrangement, thus giving the day upon which the pain left and the temperature became normal; and, further, as in my first table, giving a column which points out the average duration of the illness. These cases are drawn from the same source as those of Dr. Fagge's, with this exception: Dr. Fagge made some slight selection with regard to the amount of drug used. My cases come consecutively from the records, and I have made no selection whatever. I think it right to call attention to this point, as under the circumstances it is natural that Dr. Fagge's table should give a somewhat different result from mine.

In connexion with the above I have drawn up another table, in which, instead of averaging the duration of illness after admission, I have classified the discharges from hospital—the number of patients presented for discharge under ten, twenty, thirty and forty days, respectively, a fifth column giving the number of patients remaining in hospital longer than forty days. This table, in a large degree, obviates the difficulty which we must experience in taking averages as our test for the length of illness. Here no long period in hospital of an individual patient can interfere with the general result. The one table may be looked upon as more than supplemental to the others; it gives us a standpoint from which we can test the accuracy and value of our averages.

Seven hundred cases I have again taken; half have been treated by salicylates, half without. I have divided them into series corresponding to the interval which elapsed between the commencement of illness and the admission of the patient into hospital. This table em-

braces under its various heads a distinction between those patients who were suffering from any complications, and further gives the average date of loss of pain and of the duration of the illness.

A critical examination points out clearly and decidedly that patients taking salicylate lose their pains more quickly than those who do not. Out of Dr. Fagge's cases, of 350, 288 lost their pains within the first nine days of treatment; in my own series, of 350 cases treated in a similar manner, 247 patients lost their pain in the same period of time; whereas of 350 cases treated without salicylates, only 141 lost pain within the nine days. Is the effect stable? Apparently not, for looking at the tables we shall see that the relapses among patients taking the remedy are vastly increased; and on further examining the average duration of stay in hospital, we find that patients taking this drug remain perceptibly longer under treatment. A scrutiny of my figures closely corroborates Dr. Fagge's statements that patients soon lose their pains, but are left feeble and exhausted after the use of this remedy.

Endeavoring to estimate the effect of salicylate treatment upon cardiac complication, I have divided my 1,200 cases into three series again—350 without, 350 with salicylates, and the remaining 500 without. The construction of this table gave me no little difficulty. However, I have felt bound to enter all those cases in which the heart was noted as being affected at some period or other during the time patient was under treatment. Do not understand by this that I have included cases in which the sounds were mentioned as being rough, prolonged, or the like, but those cases only in which a definite bruit existed. The presence of such bruit would in most cases be endorsed by the opinion of the physician in charge. We find that among the 350 patients treated by the salicylates, 241 suffered from heart affection of some kind or other; among the 350 treated without the salicylates, 227 suffered from this complication; of the 500 without salicylates, 273 were affected. The proportion between the two classes is much the same, but what little advantage there is does not appear to lie on the side of the salicylate treatment. With respect to the treatment of acute rheumatism, this complication of heart affection appears to me one of the most important points for consideration.

Acute rheumatism is an expression the sum of which comprises certain known factors, to-wit: pain, fever, often dangerously high, and a liability to mischief of heart. Weigh these several factors one with the other; the preponderance of one is well nigh overwhelming. Any remedy vaunted as a specific in acute rheumatism must show in marked degree its efficacy in controlling—I would rather say in preventing—heart disease. On this one count alone salicylate acid must be prepared to stand its trial, and must further submit to the most severe cross-examination at the hands of the profession.—*Lancet*, Dec. 31, 1881.

Selections from Clinical Lectures, delivered at
the London Hospital.

BY JONATHAN HUTCHINSON, F. R. C. S.

THE PRE-CANCEROUS STAGE OF CANCER, AND THE IMPORTANCE OF EARLY OPERATIONS.—The patient who has just left the theater is the subject of cancer of the tongue in an advanced stage. The lymphatic glands are already enlarged. It is hopeless to think of an operation, and there is nothing before him but death, preceded and produced by a few months of great and continuous suffering. His case, I am sorry to say, is but an example of what is very common. Not a month passes but a case of cancer of the tongue presents itself in this condition. The cases which come whilst the disease is still restricted to the tongue itself are comparatively few; nor does this remark apply only to the tongue. "Too late! too late!" is the sentence written but too legibly on three-fourths of the cases of external cancer concerning which the operating surgeon is consulted. It is a most lamentable pity that it should be so; and the bitterest reflection of all is, that usually a considerable part of the precious time which has been wasted has been passed under professional observation and illusory treatment. In the present instance, the poor fellow has been three months in a large hospital, and a month under private care. I have never failed when opportunity offered to enforce the doctrine of the local origin of most forms of external or surgical cancer, and the paramount importance of early operation.

Nearly twenty years ago, I spoke to your predecessors concerning the "successful cultivation of cancer;" telling them how, if they wished their patients to die miserably of this disease, they could easily bring it about. The suggestion was, that all suspicious sores should be considered to be syphilitic, and treated internally by iodide potassium, and locally by caustics, until the diagnosis became clear. More recently, I have often explained and enforced the doctrine of a pre-cancerous stage of cancer, in the hope that, by its aid, a better comprehension of the importance of adequate and early treatment might be obtained. According to this doctrine, in most cases of cancer of the penis, lip, tongue, skin, etc., there is a stage—often a long one—during which a condition of chronic inflammation only is present, and upon this the cancerous process becomes engrafted. Phimosis and the consequent balanitis lead to cancer of the penis; the soot-wart becomes cancer of the scrotum; the pipe-sore passes into cancer of the lip; and the syphilitic leucoma of the tongue, which has existed in a quiet state for years, at length, in more advanced life, takes on cancerous growth. The frequency with which old syphilitic sores become cancerous is very remarkable; on the tongue, in particular, cancer is almost always preceded by syphilis, and hence one of the commonest causes of error in diagnosis and procrastination in treatment. The surgeon diagnoses syphilis, and months are allowed to slip by in a state of fools' paradise. The diagnosis, which was right at first, becomes in the end a fatal blunder, for the disease which was its subject has changed its nature. A general acceptance of the belief that cancer usually has a pre-cancerous stage, and that this stage is the one in which operations ought to be performed, would save many hundreds of lives every year. It would lead to the excision of all portions of epithelial or epidermic structure which have passed into a suspicious condition. What is a man the worse, if you have cut away the warty sore on his lip, and, when you come to put sections under the microscope, you find no nested cells? You have operated in the pre-cancerous stage, and you have probably effected a permanent cure of what would soon have become an incurable disease. I do not wish to offer any apology for carelessness, but I have not in this matter any fear of it.

EMPIRICISM AND SPECIFICS.—The patient whom we are

about to discharge cured of severe pemphigus, was sent here in order that I might do the miracle of cure under your eyes, and thus claim your belief in the efficacy of drugs. When admitted, he was covered from head to foot with bullæ; the trunk was less severely affected than his limbs, head and genitals; on these, there was nowhere a space as large as the palm free from bullæ, and on the trunk also there were a considerable number. He was in a miserable condition from pain and irritation. The eruption had been out about ten days, and it affected the mucous membrane of his mouth as well as the skin. We kept him in bed for a few days, that all might see that there was no natural tendency to amelioration. More bullæ came out; then, without making the slightest change in diet, we ordered a few drops of a tasteless solution of arsenic to be swallowed three times a day. The result was that, at our next visit, most of the bullæ had dried, and there were no fresh ones. He continued to improve greatly for ten days, when suddenly a few fresh small bullæ seemed to threaten a relapse. We doubled the dose of our remedy, making the dose eight instead of four drops; and, from that day, with the most trifling exception, the recovery has been uninterrupted. With such a fact before you, let me beg of you to believe in drugs, and to treat empiricism with respect. I prescribed, just as any old woman might prescribe, that which I knew would do good. Concerning the nature of pemphigus, I knew nothing; of its cause, absolutely nothing; of its clinical relationship, but little; of the *modus operandi* of arsenic, I knew scarcely more; but this I did know as a fragment of assured conviction, that arsenic would cause the pemphigus eruption to disappear, and the patient to regain his health. Far be it from me to speak slightly of scientific work. But let us remember that, as regards the relief of suffering, much of our usefulness must be based upon knowledge which is nowise scientific, but simply a matter of experience and memory. Iodide potassium for tertiary syphilis, bromide for epilepsy and as an anaphrodisiac, iodoform for phagedena and specific ulceration, balsam Peru for scabies; so silently have these invaluable specifics been introduced into practice, that it would puzzle most of us to say who first recommended them. Five and twenty years ago, I believe that the case of pemphigus which you have seen cured would have been

found incurable in all the medical institutions of the world, with one single exception. Much more recently than that, the disease was pronounced by Hebra to be invariably fatal. Never shall I forget seeing a poor, wretched child carried on a bed straight from the wards of one of our largest hospitals, where, during three months, all had been done for its help that benevolence, aided by science, could suggest. Yet it was emaciated to skin and bone, and so covered with sores, that it was impossible to put its clothes on. A few minims of arsenic were prescribed, and in a few weeks the child was well. So much for empirical knowledge; so much for drug specifics.

Remarks upon Small-Pox and Vaccination.

BY HARVEY L. BYRD, M. D.,

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THE prevalence of small-pox in so many portions of our country during the autumn and winter of the current year, would seem to render almost anything that might be said, looking to its amelioration or prophylaxis, particularly interesting to the profession at the present time.

The March (1881) issue of the *Independent Practitioner* contained an exceedingly practical article on the mode of vaccinating, from the pen of Dr. Barton Dozier, an intelligent young physician of Ukiah City, California; and as I have practiced his method in about two hundred cases, I am prepared to speak of it in terms of genuine commendation. He says: "I use *only fresh bovine virus*, and prefer that on ivory points to any other. I dip the point to be used in *cold water*, then lay it aside, in order that the virus coating may become well dissolved or softened. In the interim, I scarify with a dry ivory point, stroking just hard enough to scrape off as completely as possible, *without bringing blood*, the cuticle or scarf-skin, for a space of about a quarter of an inch square. I then rub the previously prepared point over this abrasion, until the virus is all off, and insist on the sleeve being kept up for at least five minutes *after* the operation is completed." Dr. Dozier further recommends that "a piece of adhesive plaster of sufficient size to cover the scarification" should

be applied before the sleeve is drawn down. He tells us that he "got as a result *ninety-seven* per cent. of successful vaccinations."

My own success has equaled his since I have adopted his method, and such of my professional friends as have pursued the plan of *scraping* off the cuticle, have been highly pleased with the results. In fact, I think it capable of affording more satisfaction than any other method whatsoever.

My failures have been absolutely *nil*, where the susceptibility to the action of vaccine virus had not been overcome by its previous introduction into the system, or an attack of variola, since I have adopted the course recommended above. I am fully satisfied, from long experience, that vaccination, when performed according to the usual methods, and with humanized virus, may be repeated successfully a number of times before the system is thoroughly *saturated* with it, or a point of complete immunity against an attack of variola is reached. I use the word *saturated* for the lack of a more expressive one, as I am entirely satisfied that when a certain point is reached, the system will receive no more impression from the virus; and then the protection against small-pox is perfect and absolute for all time to come. How often it may be necessary—if necessary at all—to repeat the process of vaccination by *scraping* off the epidermis and applying *bovine virus*, fresh from the cow, I am not prepared to say, as my experience in this way has been too brief. But when the point of saturation is reached, the system is fully protected against the invasion of variola.

Another interesting fact mentioned by writers on vaccination, has frequently been verified by my own observations, and the truth of which should be as widely disseminated as possible, viz: that vaccinia may be successfully introduced, and its protective power secured even in the very presence of variola, so to speak; and its influence against the latter relied upon implicitly. Thus, by way of illustration, a case of small-pox may occur, or is introduced into an unprotected, unvaccinated family, but should successful vaccination with bovine virus be immediately, or even within a few hours, performed upon the other members of the family or household, such persons will be protected entirely from the variola under which the patient labored. This fact I have verified in

several instances, and would respectfully and confidently urge its adoption as a safe and reliable prophylactic against the small-pox germs or contagion, even after pustules have been fully developed, and free intercourse has taken place for several hours between the patient and unvaccinated persons. The more rapid saturation of the system by the vaccine virus, and consequently earlier development of the several phases, or stages, of that disease, than that of the variola germs, should always cause it to be resorted to with reliable bovine virus, whenever an unvaccinated person is brought into contact with one suffering from small-pox. I favor repeating vaccination from time to time, until it ceases to affect the system, and when this point is reached, I feel warranted in saying that the protection against small-pox is absolutely perfect; the dicta and illogical statements of the opponents of Jenner's immortal boon to the human race to the contrary notwithstanding.

Cancer of the Prostate.

BY RANDOLPH WINSLOW, M. D.

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(Read before the Clinical Society of Maryland, Feb. 3, 1882.)

THE prostate gland enjoys very great immunity from cancerous affections, more so, perhaps, than any other organ in the body. Why cancer should select some tissues for its frequent seat, and almost entirely neglect others, is a subject full of interest, but as yet not understood. It is the harder to understand this in the case of the prostate, as it is a musculo-glandular organ of considerable functional importance, and is situated in close proximity to the bladder and rectum, both of which are frequently the seat of cancerous growths. Whilst it is excessively rare for cancer to affect this gland, the frequency of senile hypertrophy is proverbial; and acute inflammations and abscess are not rarely met with.

The first systematic treatise on diseases of the prostate is that of Sir Everard Home, published in 1811, and a second edition issued in 1818. He does not even mention, in either edition, cancer as being one of the diseases

to which the prostate is subject. Bingham, writing in 1822, mentions cancerous fungous projections from the prostate as a cause of retention of urine, which, by falling against the orifice of the urethra, acts as a ball and valve. The affection here described by Bingham is evidently a villous tumor, which may or may not be of cancerous nature, and it is probable that in these cases the tumor is not attached to the prostate but to the mucous membrane of the neck of the bladder. Howship, writing in 1823, mentions schirrous induration of the prostate gland in old persons, but it is easy to recognize in this description the senile hypertrophy, which is so often present. Guthrie says nothing about cancer of this gland in his book published in 1834, nor does Wm. Acton, who wrote in 1852. Wm. Coulson, in 1857, says the prostate may be enlarged or may contain medullary nodules consecutive to cancer of the bladder, but this is rare, and the organ is not often involved in cancer of the bladder. Whilst he has never met with true scirrhus of the prostate, hardness may be caused by any deposit, which stretches but does not break the capsule. "The so-called scirrhus of the prostate," says Civiale, "of which so much has been spoken by Bailie, Desault, Chopart, and others, is nothing more than considerable induration of the gland, the tissues of which sometimes acquire sufficient consistency to creak under the knife."

As to cancer, it is so rare that Prout and Cruveilhier affirmed they had never met with it. Rokitansky says: "Cancer in any shape rarely occurs in the prostate. Medullary carcinoma may occur occasionally, giving rise to considerable enlargement. It may perforate the fundus vesicæ and sprout into its cavity, causing a cancerous ulcer with raised edges." Coulson has met cases of medullary cancer, but not of true scirrhus of this gland. Phillips, in 1860, said: "Recent microscopic studies have proven the great rarity of cancer of the prostate. All forms occur; encephaloid is the most frequent, then colloid, melanotic and fibro-plastic. It may occur at all periods, from infancy to old age."

Sir Henry Thompson says: "The prostate gland may be subject to cancer, either primary or secondary; either is very rare, especially secondary involvement, but cancer of this organ is not so rare, as is usually supposed, Tanchou's statistics being defective." In 8,289 cases of

death from cancer, tabulated by Tanchou, there were only 5 deaths from prostatic cancer; but as only 2,161 of these cases were males, and in 829 the seat of disease was not reported, it leaves 1,904 deaths in males from cancer, and 5 of these from cancer of this gland, or 1 in 380. When the prostate is secondarily invaded, it is almost always consecutive to cancer of the bladder. Sir Henry has only once seen it follow cancer of the penis. Encephaloid is the most frequent form in children always, and in adults the exceptions are very rare. He believes with Dr. Walshe, who wrote in 1846 that the evidence of the occurrence of true scirrhus is defective. Malignant disease of the prostate is only observed in childhood and in advancing age, no cases being reported between 8 and 41 years. The duration of the disease varies from one and a half to five years in adults; from three to nine months in children.

Van Buren and Keys, in 1875, state that "primary cancer of the prostate is exceedingly rare." They differ from Sir Henry Thompson in stating that prostatic cancer is "usually secondary to advanced malignant diseases elsewhere, especially in the kidneys or testicles." In *Amer. Jour. of Med. Science*, July, 1877, is the abstract of a primary case of true scirrhus of the prostate occurring in the service of Dr. Dickinson at the Northern Hospital of Liverpool, the diagnosis being verified by subsequent microscopic examination.

Agnew and Bryant each consider prostatic cancer to be generally secondary to disease elsewhere.

The symptoms of malignant disease of the prostate are those common to obstructive affections of the bladder and cystitis, but are usually more rapidly induced, and of greater severity. There is nothing distinctive in the symptoms, and the disease is generally far advanced when recognized. At first there may be no subjective symptoms, but as the prostate enlarges there will be pain and increased frequency of micturition; subsequently there may be obstruction, requiring the use of the catheter, and hemorrhage from the urethra or bloody urine; the urine will also contain an increased amount of epithelial debris. Pain will be felt in the perineum and rectum, or radiating down the thighs, or into the back, and this pain is often very intense. Emaciation will be rapid and progressive. The local symptoms are not more distinctive

than the general; there is always some enlargement of the organ; sometimes this occurs very rapidly. The tumor is irregular in size and consistence, sometimes being hard and tense, sometimes soft and semi-fluctuating. The glands accompanying the iliac vessels are generally enlarged, and may be felt through the abdominal walls in some cases.

The treatment is, of course, only palliative, consisting of treatment of the accompanying cystitis, relief of urinary obstruction by the judicious use of the catheter, and when the obstruction is complete, an artificial opening may be established above the pubis. Anodyne by the mouth or in suppositories will always be required. Hemorrhage is occasionally a troublesome complication, which requires appropriate attention. Tonics, stimulants and judicious alimentation have their place in the treatment of this necessarily fatal disease.

Treatment of Typhoid Fever.

DR. H. V. FERRELL (*St. Louis Clin. Record*) says: The treatment of typhoid fever is quite satisfactory, the mortality in my experience barely exceeding two per cent. In the treatment there are three fundamental rules to be kept in view:

1. Put the patient to bed early, and enjoin the most absolute rest throughout the whole course of the disease. In all cases of doubt in the diagnosis, I advise the patient to take his bed. If it is not typhoid, rest is not apt to hurt him, and if it is, it may be the very means of saving his life. In *every* one of my fatal cases this rule was *not* observed. In two cases of death from perforation, one had been about with the fever on him for two weeks, the other three. In the one from hemorrhage, the young man tried for near three weeks to wear the fever out. I have lost no case where the patient took to bed early.

2. Early and judicious alimentation; by early I mean within the first forty-eight hours. The aliment should be highly nutritious, easily assimilated, in a liquid form, and given at regular intervals.

3. Use drugs only to meet indications, and with a well defined purpose and no longer than that purpose is subserved. The German specific treatment I believe to be

utterly worthless, if not worse. If the temperature runs high, use quinia and digitalis in large doses, sponge the surface freely and frequently with equal parts of whisky and water, to which may be added a little muriatic acid. To control the bowels and to correct the offensive odor of the discharges, bismuth and carbolic acid, or bismuth and liq. sod. chlorinati. For the vomiting, which is sometimes very troublesome, oxalate of cerium in 10 gr. doses, or calomel in doses of the $\frac{1}{10}$ or $\frac{1}{12}$ of a grain. For restlessness or sleeplessness, codeia has answered my purpose best. For intestinal hemorrhage, hypodermic injections of ergotine, or what answers just as well, Squibbs' Fluid Extract of Ergot. For great muscular or nervous weakness I have seen tr. nucis vomicæ, produce excellent results.

Finally, I have no sort of doubt as to the utility of alcoholic stimulants early and judiciously administered.

Quackery within the Profession.

THE profession is probably unaware of the progress steadily made by medical quackery in its diverse forms and disguises. Quackery which is not medical—in the sense of being practiced by duly qualified men—is undoubtedly an evil, but its consequences are not comparable with the effects of such quackery as is growing apace within our own ranks, and slowly it may be, but surely, undermining the respect and confidence which the profession has hitherto deserved and received from the public. We sometimes wonder that our calling does not command the warm recognition in certain quarters to which it seems entitled. For a sufficient explanation of this default in the estimation of society, let us look to the prevailing and almost daily increasing popularity of “systems” and “cures” tacitly, if not avowedly, supported or countenanced by the profession. There is a sentimental and mock-heroic spirit abroad which burlesques the candor of “truth-seeking,” and even mimics the impulses of chivalry. We hesitate to condemn any system, “lest there should be some good in it,” and we are too tender-hearted and polite to deal honestly by its promoters, even though we recognize the fallacy of their pretensions, and more than suspect their

motives. This is not a faithful line of conduct in reference to our profession, nor is it loyal to science, which is one of the many constituent parts and aspects of truth. We know, or ought to know, that a perfectly just and truthful conception of the science of medicine must bar the recognition of *systems* and *cures* of any class or description. The art of healing is not a system, and can never be made one. It is simply an intelligent application of the laws of health in the remedy of disease. We study the "symptoms" of a malady with a view to the acquisition of precise knowledge as to its nature, course, and rational treatment. We pursue the investigation of disease over the boundary-line of death, and explore the cadaver with a view to ascertain the effect of the morbid state on the organism, and to elicit its organic causes, albeit we too commonly confound effects with causes. We test the powers and analyze the constitution of drugs, and we scrutinize and make careful trial of methods of treatment, to obtain a reasonable acquaintance with their natures and actions. In brief, we take any amount of trouble and resort to *every* means at our disposal to render the principles and practice of our art *rational*. This is our duty, and it is the only method consistent with self-respect and professional integrity; but, if side by side with this policy, we cherish a spirit of credulity which renders us ever ready to countenance systems of which we can know nothing—because there is nothing to know—and take a false pride in showing friendliness to quacks and charlatans, the good work we ourselves may do is changed to evil by reason of the actual or implied sanction we give to the bad work done by others. Nothing is so much needed just now as the rise in our midst of a stern and uncompromising apostle of sincerity in science—a man of unpitying animosity to humbug in all its forms, who will not hesitate, at any bidding, to denounce wrongdoing and untruthfulness, let who may be the offender. It is time that a spirit of manliness went out in our ranks to chase away the lying spirit of mock courtesy—the faint-hearted and time-serving sentimentality—which makes us so ready to look kindly on any pretender, and so reluctant to expose any pretense.

There can not possibly be a "system" or "cure" in medicine. There are no rule-of-thumb methods and no *mysteries* in true science. If we do not know what a

remedy is, and how it acts, we have no right, as honest men, to employ it. The time has passed for the working of cures by charms and the recourse to nostrums. We pander to the credulity of the unskilled community when we show ourselves credulous. We patronize and encourage quackery when we extend professional recognition to a quack. Every man is a quack—whether qualified or unqualified—who employs a remedy without knowing why, or who adopts a “system” in medicine. The profession must speak out clearly and strongly on this point, and without delay. From the highest places in society to the lowest ranks of the people, there is just now a grievous readiness to “believe in” quacks and quackery. We have ourselves to thank for this most adverse “feeling” and “influence.” It is the stirring of the viper we have brought in from the cold, where physicians and surgeons of more robust intelligence than those of to-day left it—the viper we have warmed and fed and brought back to life; and now it is preparing to rise and sting the hand that caressed it. The way to encounter the charlatanry which is making head against science is to be at once more candid and more conspicuously *honest* in our dealings with the public. We must lay aside the last vestige of the robe of mystery, and show by our words and works, our conduct and policy, that medicine is not a science that admits of inspiration, and that the practice of healing is not an art which can be acquired by the unlearned. There is no system or cure, or charm, or nostrum, known to the profession; our calling consists solely in the rational study and treatment of disease on common-sense principles. For those who pretend to a sort of inspiration we have no professional friendship; and towards the promoters of systems and ‘pathies we can have no leaning, or any feeling other than that of suspicion, if not pity and contempt. They can have no place in our professional intercourse, and we can have nothing to say to them or their work. This is the only sentiment worthy of the medical profession in its dealings with medical quacks, and the time has come when the revival of its old spirit is most earnestly to be desired.—*Lancet*.

Is "Congestion of the Brain" a Correct Pathological Expression?

IN the course of his Croonian lectures on the influence of the circulation on the nervous system, delivered last spring before the Royal College of Physicians of London, Dr. Walter Moxon answers the question very emphatically in the negative. After a very instructive analysis of the various anatomical, physical and physiological elements involved in the subject, Dr. Moxon continues as follows:

"Can you, in any individual case, prove by post-mortem appearances that death was caused by congestion of the brain, or even that a state of congestion of the brain or over-fullness of its bloodvessels preceded death? I believe these questions must be answered firmly in the negative. In establishing such a negative, one has to meet with a very strong prejudice, rooted in most tenacious grounds—the grounds of convenience and of ancient and universal acceptance. After examining a body dead from brain symptoms, when all you are able to see in your examination is only that the veins are very full of blood, it is very convenient to be able to say that death was caused by congestion of the brain, and it sounds much better for a skilled witness than to say that death was caused by insensibility; so that the doctrine of congestion of the brain is convenient, and the universality of its acceptance may be illustrated by the naive earnestness with which authors of great works adopt it. . . . We find writers giving four conditions as showing congestion. The first is the swollen state of the brain, so that it seems after removal from the calvaria almost too large for the cavity which contained it. The dura mater seems tightly stretched over it, and, on reflecting this, the convolutions appear broad and flattened, and the sulci less obvious. No allusion is made here to hypertrophy of the brain, which is known only, so authors say, by its causing a general enlargement of the whole organ. I have never seen such hypertrophy, but the flattening described has very frequently come under my observation, but always in the presence of some obvious cause of expansion of the brain; in the form, usually, of an increase of the intraventricular fluid, or else of apoplectic bleeding or of tu-

mor, in which case the swelling and flattening are more localized.

"The next evidence (of congestion of the brain) mentioned by writers is the distention of the veins and capillaries with blood; the veins are tortuous and varicose, the gray matter dark. Both this and the white matter show abundance of bloody points and gorged vessels, and the description ends with, 'It is extremely difficult to draw the line and say what is morbid and what is consistent with health.' Now, it is better, nay, it is necessary, to say firmly that it is simply impossible to draw the line and to say what is consistent with health. But the question is not about the degree of health to be inferred from a post-mortem, but whether the mode of dying, the position of the body after death, or the manner of making the inspection, will not determine the appearance of extreme over-fullness of the vessels of the brain of the dead person, independently of the conditions which were antecedent to all this. Can we infer from the amount of blood in the brain after death the amount during life? Kussmaul and Tenner, after numerous experiments, under various conditions and circumstances accurately predetermined, declare as the result of their investigations that they could not deduce any results from post-mortem examinations undertaken to ascertain the state of fullness before death of the most important parts of the vascular system. Now, if this is the conclusion, where the conditions before and after death were determined and known, how can it be said that the amount of blood found after death in the human brain will show the amount present before death, when the conditions before and after death were unknown and undetermined?"

The author applies the same line of reasoning to other organs—to the liver and to the stomach, with special reference to the appearance caused by sudden death by heart disease. He then continues: "During life, redness, when associated with swelling, heat and pain, are at one with these associates in proving the existence of inflammation; but after death the redness, which was due to the enlarged scope of vascular play, ceases, because vascular play has ceased with life. The consequence is not doubtful, but it is quite certain that after death the redness goes from inflamed and congested parts. Such serious issues may turn upon this point that I think it very

necessary to clearly recognize that no degree of redness, or pinkness, or over-fullness of blood about the brain or its membranes, can prove that there was any morbid state of the circulation within the head before the act of dying. Death by asphyxia increases the amount of blood in the head, but a dependent position of the head after death, if only for a short time, will cause a similar increase. It should be taught that it is a sign of ignorance to say in a coroner's court that congestion of the brain was found on post-mortem examination to be the cause of the person's death."

These emphatic words have an obvious medico-legal application. To those who are in the habit of making autopsies with what is deemed proper thoroughness for judicial purposes, and who have invariably opened the head of the cadaver with that end in view, and have noted and described, with more or less faithful attention to details, the blood supply of the brain and its meninges as an essential part of the examination, these new teachings will suggest the propriety of revising the usual interpretation of injected bloodvessels. But the observations of Moxon can not serve to justify the examiner in omitting to examine the contents of the cranium in every instance of post-mortem inquiry in death by violence, no matter how evident the cause of death may seem to have been declared upon inspection of other regions of the body. If the medical jurist desires an excuse for saving himself extra labor with the saw, mallet and knife, when he thinks he has found the cause of death in some region below the head, he will find a distinguished American precedent in the record of the autopsy of the late President Garfield; it will be remembered that before proceeding to the inspection of the body in that case it was "unanimously agreed not to open the head."—*Boston Med. and Surgical Journal*.

Tabes and Syphilis.

PROF. W. ERB, *Centralbl. f. d. Med. Wissensch.*, Nos. 11 and 12, has made a recent careful study of over one hundred well-marked male cases of locomotor ataxia, and finds the result to still further confirm his previously experienced views (*Deutsche Arch. f. Klin. Medicin*, Bd 24,

1879) as to the connection of this disease and syphilis. In the first one hundred cases he found only twelve without a previous history of syphilis or chancre; of the remaining eighty-eight, fifty-nine had had the secondary manifestations of the disease, and twenty-nine had had simply chancres. Of these last, eleven had been treated constitutionally with mercury and iodide of potash, so that it is presumed that their sores were of the infecting variety; in fifteen of the others particulars as to the nature of the sore are wanting; in only three was it specified as a "soft" chancre. As regards the time of the first manifestation of tabetic symptoms after the syphilitic infection, the following are the facts: The symptoms of tabes developed between the

1st and 5th year in 17 cases.				
6th	"	10th	"	37 "
11th	"	15th	"	21 "
16th	"	20th	"	3 "
21st	"	25th	"	5 "
After the 31st		"		2 "
Unknown		"		3 "

88 "

In order to meet the objection that syphilis occurred so frequently in the class of people under his observation that it might be considered as an accident always to be looked for, Prof. Erb gives a comparative statement of a similar examination to that of his tabetic patients, of four hundred of his adult male patients suffering from other affections, chiefly nervous, and finds that seventy-seven per cent. of these had no history of syphilis or chancre whatever; that twelve per cent. had had secondary syphilis, and eleven per cent. simply chancre. Thus in the general adult male invalid population under his observation, the tabetic cases excluded, only twenty-three per cent. were in any way syphilitic, while in the tabetics alone eighty-eight per cent. had a history of syphilis. "In fact," he says, "if one will not refuse all assistance from statistics and logic in the solution of this question, it must be admitted that these figures speak most emphatically in favor of the view that there is an etiological relation between syphilis and locomotor ataxia." Of course, they are not absolutely conclusive, but they go

far to support the author's views. It is well worth while for others who have large opportunities for observation in this line to make similar examinations. It can not be said that if syphilis be proven to be at the bottom of most cases of this disease, that its prognosis is necessarily improved, but it does not render it any more unfavorable, and it will be a very interesting practical point.

The Physiology of the Spleen.

IN spite of the numerous and valuable studies of which the spleen has been the subject, its function, with that of the other so-called ductless lymphatic glands, still remains involved in considerable obscurity. Its inclusion in the group of blood-making organs has been established beyond doubt, and Schonfeld and Tarschanoff have described its periodic changes in bulk, a relation being found by the former between the changes in volume and changes in blood-making activity, while the latter, as well as Setschenoff and Sabinsky, have traced the relations between the size of the organ and various conditions of nerve influence. Some recent studies undertaken by Dr. Chas. S. Roy, on the characteristics of the normal splenic circulation, and the vaso-motor mechanism of the organ, published in the *Journal of Physiology*, January, 1882, promise to throw considerable light on this subject.

Dr. Roy's method consists in enclosing the spleen in a rigid metal box, of appropriate shape, filled with oil, and of such a construction that, while no hinderance is offered to the entrance and exit of blood by the splenic arteries and veins, any change in the volume of the organ causes a rise or fall, corresponding in extent, of a recording lever writing upon the moving paper of the kymographion.

Dr. Roy finds that the spleen is continuously contracting with a rhythm which, in so far as the element of time is concerned, is remarkably constant, averaging about sixty contractions an hour in the case both of dogs and cats. The extent or volume of the splenic systole is, however, subject to great variations. For although no pulse wave is evident, and only slight indications of a respiratory wave, the force of the muscular contractions, and hence the quantity of blood expelled from the spleen,

varies considerably. It is also interesting to note that, even when the general blood-pressure in the organ is greatly diminished, as by closure of the aorta, there is only a partial reproduction of the change in the spleen volume, indicating that the passages by which the blood enters the spleen are comparatively narrow, and that the mass of blood in the organ is practically cut off from the arterial system, and that, therefore, the circulation through the organ must be carried on almost exclusively by the rhythmical contraction of the smooth muscular fibers of the splenic capsule and trabeculae, and not by the general blood-pressure. These experiments, therefore, indicate the existence in the spleen of a function hitherto unsuspected: that of propulsion of its own circulation; while they also show that the splenic systole may be an important element in the maintenance of the portal circulation.

As regards the vaso-motor mechanism of the spleen, Dr. Roy finds that stimulation of the vaso-motor center, as by asphyxia, or direct stimulation, as has been pointed out by Tarschanoff and Setschenoff, causes a rapid contraction of the spleen, which Dr. Roy shows is not due exclusively to a contraction of the walls of the arterioles, but also to the contraction of the special muscular fibers of the organ. Reflex stimulation of the vaso-motor center by stimulation of the central end of a sensory nerve, even after division of the splanchnics and vagi, produces analogous results, as also follow stimulation of the peripheral end of either splanchnic or vagus, though there does not appear to be any splenic vaso-motor "*tonus*" passing along these nerves, as their section is not followed by an expansion of the organ. These results also show that there must be a fifth path for the vaso-constrictor influences from the cerebro-spinal centers; and since section of the vagi and splanchnics does not interfere with the splenic rhythm, there must be some special mechanism in the organ itself by which its systole and diastole are regulated.

The importance of these investigations, and particularly the value of his method, is evident, and we trust soon to see the publication of his results on the action of different substances in the blood on the splenic circulation, as well as his deductions as to the bearing of these observations on the general physiology of the spleen.

Transfusion of Blood for Hemorrhage in Typhoid Fever.

DR. F. A. MAHOMED (*British Med. Journal*) gives two cases. The first was that of an unmarried man, aged 26, who was stout, rather bloated, and thoroughly out of condition. He passed through an anxious attack of enteric fever, complicated during the latter part of it by wakeful excited delirium, resembling that of delirium tremens, a complication not unfrequent during the defervescence of the specific fevers, and perhaps more especially liable to occur in persons addicted to the excessive use of alcohol. He relapsed on the twenty-fifth day of his illness: on the tenth day of his relapse, and the thirty-fifth of his fever, he had a severe hemorrhage, which recurred twice on the following day. Exhausted, anæmic, restless, with cold extremities, and a very small, thready and often irregular pulse, about 160 per minute, he was evidently fast sinking, when transfusion was performed with the immediate result of bringing down his pulse-rate from 160 to 144. After this he rallied for a few days, and even gained ground so much as to give great hopes of his ultimate recovery. Six days after the operation, hemorrhage recurred to a small amount, which caused a sudden change for the worse; one or two more slight discharges of blood soon reduced him to a state of exhaustion, from which he could not recover. He died nine days after the operation, on the nineteenth day of his relapse and the forty-fourth of the fever.

The second case, male, married, was twenty-five years of age—a powerful, well-made man, who, during his attack of fever, suffered a probably irrecoverable injury by collapse of a large part of his right lung, while in addition to this he had severe general bronchitis. On the twenty-sixth day of his illness he, too, had a relapse. On the fifth day of his relapse, and the thirty-first of his illness, he also had a severe hemorrhage; four days later he had three more severe hemorrhages, and relapsed into a state of complete exhaustion and impending dissolution. On the following day, when he appeared to be *in extremis*, transfusion was performed with the best possible effects; for two days he rallied greatly, when, during the exceptionally cold weather, his bronchitis increased, and he died

from the lung complication on the fifth day after the operation, on the fifteenth of the relapse, and the fortieth of his fever.

Dr. Mahomed gave some statistics showing that the average frequency of hemorrhage in enteric fever was about 7 per cent. of all cases, and that about 50 per cent. of these were fatal; that more than half of the fatal cases of hemorrhage lost their lives as a direct result of the bleeding; and that in these cases more especially the operation might be called for. Each case must be judged on its own merits, and he would advise its performance whenever the patient was sinking into a dangerous condition, as a direct result of the loss of blood. He claimed that by means of it fatal exhaustion and syncope might be warded off, and time given for the action of remedies; a ready stimulant and food supplied to the heart and tissues; and the danger of destructive ulceration of the intestines during exhaustion and anæmia diminished. He advocated only direct transfusion of human blood by means of Aveling's transfuser, with a small expansion and no valves.—*Hosp. Gazette.*

Treatment of Typhoid Fever.

WHILE appreciating fully the value of frequent sponging of the cutaneous surface with water, whenever it is hot and dry, as a palliative in typhoid fever, I have found it to exert but a feeble influence over the progress of those general deteriorate molecular changes throughout both the organized structures and the organic constituent of the blood, which constitute the essential pathology of this variety of fever. To more effectually counteract these morbid changes we need some remedy capable of exerting a general alterant and antiseptic influence, and maintaining it for considerable time without depressing the strength, or creating local complications. The last time I took you to the bedside of typhoid patients I called your attention to the effects of iodine, which I had then commenced giving with the hope that it might be found capable of exerting more nearly the actual alterant and antiseptic influence needed, than any of the remedies hitherto used in such cases. Since then I have continued to use the remedy in all

well marked cases of typhoid coming under my supervision, both in the hospital and in private practice. Without counting the case before us to-day, which is yet under treatment, the whole number of well marked cases in which the iodine was given as the leading remedy, is fourteen. Seven of these cases occurred in private practice, and the other seven were treated in these wards. Of the seven cases treated outside the hospital, five came under care during the first three days after the patients took to their beds; the other two not until the first half of the second week. Of those treated in the hospital, two were admitted on the third day of the fever, two on the fifth and sixth days, and the remaining three between the seventh and tenth after the commencement of the disease. —You will note that nine of the fourteen cases were brought under treatment during the first week after the onset of the disease, and the other five not until the first half of the second week. The treatment in all these cases consisted in the administration of from 12 to 15 minims of the following solution of iodine:

R	Iodinii	- - -	0.5 grams	- - -	- grs.	viiij
	Potassii iodidi	- 2.0	"	- - -	"	xxx
	Aquæ distillatæ	45.0 cc		- - -	-	℥jss
	M.					

These doses were generally diluted with 30 cc. or two tablespoonfuls of sweetened water, and repeated every four hours for the first three or four days, and then every six hours until indications of convalescence appeared. Whenever the intestinal evacuations become too frequent and thin, a teaspoonful of the ordinary turpentine and laudanum emulsion was given between the doses of iodine. When the temperature rose to 40 C. (104° F.), and the skin dry, the patients were frequently sponged with cold water. Two of the seven treated in private practice took two grains of sulphate of quinia three times a day during the last week of their progress. Nearly all of the seven treated in the hospital wards took small quantities of the mineral acids largely diluted with water during the earlier part of their treatment, and small doses of quinine three or four times in the twenty-four hours during the latter part. All the fourteen were carefully nourished by the faithful giving of milk, wheat-flour and milk-gruel, and beef-tea, at regular intervals.

No alcoholic liquids, either fermented or distilled, were given to any of these patients during any part of their treatment. Of the nine cases in which the treatment was commenced during the first week after the patients took to their beds, four convalesced between the twelfth and fourteenth days; three between the fourteenth and seventeenth, and two between the seventeenth and nineteenth. Of the five cases in which the treatment was not commenced until the first half of the second week of their progress, three convalesced between the eighteenth and twenty-first days, and the other two between the twenty-first and the twenty-fifth. No one of the fourteen suffered a relapse, and no case terminated fatally. I now call your attention to the fifteenth case, in room 11, which was admitted into the hospital on the 3d of December, presenting all the symptoms of a severe grade of typhoid fever, which had commenced three days before his admission. He was put directly on the use of the solution of iodine, alternated with the turpentine and laudanum emulsion, to control a loose and tympanitic state of his bowels, with milk, and milk and flour gruel for nourishment. The case progressed favorably, and convalescence was established in about twenty days from the commencement of the disease, or seventeen days from the beginning of his treatment. This convalescence proceeded until he was able to be up, dressed and about the house, with a good appetite and natural state of his evacuations. Nearly two weeks from the commencement of his convalescence, he began again to complain of the premonitory symptoms of fever, and on the third day had so distinct a chill that it was thought he might be under the influence of malaria, and he took three decigrams (grs. v) of quinine three times a day for two or three days. The fever, however, again assumed an unmistakable typhoid character, with considerable delirium and some looseness of the bowels. The original treatment with iodine and the emulsion was resumed, and has been continued to the present time. His temperature has declined below 38° C. (99° F.), in the morning, and 38.3° C. (101° F.), in the evening, with a clean, moist tongue, and other indications of approaching convalescence. I learn that this patient has formerly been affected with insanity, and his brain and nervous structures may have been somewhat enfeebled. But of

the final results of his present sickness you will be informed in due time.

During the last four days three new cases of typhoid fever have been admitted into my wards, and all placed under the treatment I have been detailing. You can now examine them in their respective beds, and note their progress at subsequent clinic hours. To prevent being misunderstood, I will add, that I am not using iodine as a *specific* curative agent in typhoid fever, but simply as a general alterant and antiseptic, adapted to fulfill certain rational indications afforded by the pathology of the disease, and always to be aided by such collateral remedies as the abdominal or other local symptoms may indicate.

From my present experience, I am led to think it is a remedy of great value, especially when its use is commenced in the forming stage, or during the first week after the confinement of the patient from the development of the fever.—*Prof. N. S. Davis, M. D., in Chicago Med. Jour. and Examiner.*

MICROSCOPY.

Bulloch's Microscope Stand.

BY A MICROSCOPIST OF CHICAGO.

THE Congress stand of Mr. Bulloch is a beautiful, first-class stand, having all the latest improvements. Like all first-class instruments, it is made of brass. The body of the instrument is supported on two stout pillars, which are attached to a round brass-plate; this plate is silvered on its edge and graduated to degrees; it rests on a broad, flat tripod, upon which it rotates. This arrangement is for determining the angular aperture of object-glasses. The method of using it is by turning the microscope into a horizontal position, bringing the front of the object-glass over the center of the base, and looking through the instrument at a distant light. The instrument is then turned until the light is about to disappear on one side of the field of view, and the position noted; the instrument is then turned until the light is about disappearing

on the opposite side of the field—the angle traversed by the instrument will be the angular aperture of the objective used.

The rotating plate is provided with a clamping screw, for the purpose of fastening it in any desired position.

The tops of the pillars are terminated by trunnions, which allow the instrument to be inclined at any angle from vertical to horizontal. Two screws provided with milled heads, one screw on each side, clamp the instrument securely at any inclination.

The body is a binocular of the Wenham pattern. It is moved up and down by a rack and pinion on a very broad slide of peculiar construction, adapted to give unusual steadiness, and prevent the possibility of lateral motion.

The fine adjustment, instead of being in front, according to the old method, is placed behind, and moves the whole tube. This arrangement, besides being more convenient to use, prevents lengthening and shortening the tube, which is a fault with those patterns having the fine adjustment in front. This lengthening or shortening, of course, changes the magnifying power every time one focuses his instrument. Besides this, the fine adjustment moving the body on such a long slide, ensures more perfect workmanship than by the other method.

This arrangement of the fine adjustment also admits of another improvement which is found in this stand. This is an extra nose-piece, for the use of the modern wide-angled objectives. It is well known that the perfect working of a binocular requires the diaphragm both below and above the binocular prism. These diaphragms cut off the outside rays and so destroy all the advantage which these glasses are constructed to secure. Mr. Bulloch avoids this difficulty by making the ordinary nose-piece, containing the binocular prism, removable, and by furnishing another nose-piece, specially adapted for this class of glasses.

Besides these two nose-pieces having the ordinary "society screw," the stand allows another improvement. They both screw into a larger screw called the Butterfield broad-gauge screw. By taking the nose-piece having the society screw out, we have another screw then which allows the use of certain modern low-power glasses that can not be made to fit into the ordinary society screw.

The stage is another noticeable feature of this stand.

It is a rotating mechanical stage, with a very convenient arrangement for centering for different objectives. The mechanical motion is accomplished by two pinions, one working through the other, and placed perpendicular to the stage. "A modification," Mr. Bulloch says, "of an arrangement used by Spencer in 1853." The stage has a motion of one inch each way. This arrangement permits of the use of an extremely thin stage, admitting, in this case, the unprecedented angle, for a mechanical stage, of about one hundred and sixty degrees; besides avoiding the incumbering of the under side of the stage with any machinery whatever. It also allows of a complete revolution on the optic axis. There are scales on the top of the stage with pointers, to serve the purpose of the Mattwood finder.

The stage is also graduated to degrees, for measuring the angles of crystals, and so forth.

The mirror and sub-stage both swing on a pivot, whose center is on a line with the object on the stage of the microscope. These are fastened together by a spring stop, which allows them to be used together, or each one to be swung separately. There are graduations indicating the angular distance which the mirror or sub-stage are swung from the center. By this means, the angular aperture of the objective can be measured by fastening a small lamp, provided for the purpose, to the sub-stage, according to the method made use of by Dr. Blackham. A stop also indicates when the sub-stage or mirror are at the center. The sub stage has a centering arrangement placed all behind the tube of the sub-stage, so as to be more out of the way and more convenient than the old-fashioned screws.

Some makers make the sub-stage and mirror bars swing together inseparably; but by allowing them to move independently of one another, the sub-stage may be used to hold the hemispherical lens, as suggested by the Hon. J. D. Cox. It is well known that one of the main obstacles to the use of this elegant modern accessory is, that it is extremely difficult to center; by this means, however, all difficulty is avoided.

Both the mirror and sub-stage can be used, when the instrument is in a vertical position, with the same facility as when the instrument is inclined—a feature which is

possessed by no other large stand within the knowledge of Mr. Bulloch.

A New Blood-Corpuscle.

ACCORDING to Bizzozero, if the circulating blood in the small vessels of the mesentery of chloralized rabbits or guinea-pigs is observed under a high power, there will be seen besides the ordinary red and white cells, a third form of corpuscle, which is colorless, round or oval, and from one-half to one-third the size of the red corpuscle. Bizzozero says that it is owing (1) to their want of color and translucency, that they have hitherto escaped the notice of observers. (2) They are less numerous than the red and less visible than the white corpuscle. (3) Owing to the great difficulty of observing the circulating blood in the small vessels of the warm-blooded animals. They can be seen also in freshly-drawn blood, for the most part aggregated around the white corpuscles, or immediately under the cover-glass to which they adhere. They soon become granular and give rise to what is called the granule masses. Through appropriate reagents, their form can be preserved. A solution of salt colored with methyl-violet, has this property. The best method of examining them in the human subject, is to place a drop of the above-colored solution over the puncture and mixing the drop of blood thoroughly with it. Owing to their typical forms, it is very unlikely they are derived from the red corpuscles.

The colorless corpuscles contain no ingredients from which they could be derived. After bleeding, and in many diseased conditions, they are increased in number. They play an important part in the formation of thrombi and the coagulation of the blood. They form the principal part of white clots in mammalia. It is probable that they play the *role* in the coagulation of the blood which has been attributed by Mantegazza and Schmidt to the white corpuscles, because the latter are few in number in the circulating blood, and their destruction was never observed by Bizzozero, provided the blood was mixed with a saline solution. Again, the time at which coagulation sets in, corresponds very closely to the time that these new corpuscles undergo degeneration. The fluids which retard or prevent coagulation—as solutions of car-

bonate of soda and sulphate of magnesia—have the same action in preventing the granular degeneration of these corpuscles. The indifferent solution of salt does not preserve them, but one to which the methyl-violet has been added does.

From this evidence it appears as highly probable that the formation of fibrine takes place, under the direct influence of these corpuscles. To them Bizzozero gives the name of "Blutplattchen."

GLEANINGS.

TREATMENT OF HYDROCELE AND SEROUS CYSTS IN GENERAL BY THE INJECTION OF CARBOLIC ACID.—Dr. Levis states that he has been experimenting, with a view of determining what substance may best secure the obliteration of the secreting surface and the adhesion of the walls of the cyst with the most certainty and the greatest freedom from suffering and danger. Having selected carbolic acid as an agent which would provoke simply a plastic inflammation, he injected one drachm of the deliquesced crystals into the sac of a large hydrocele. The new procedure was entirely painless. A sense of numbness alone was experienced, and no inconvenience was felt, until on the next day the desired inflammatory process was developed. A nine years' hospital and private experience leads the author to believe that this method is the most satisfactory for the object. For the purpose of injection, crystallized carbolic acid is maintained in a liquefied state by a five or ten per cent. solution of either water or glycerine; the crystals are to be reduced to the fluid state with no more dilution than may be necessary for this. After the usual tapping he injects the liquefied crystals with a syringe having a nozzle sufficiently slender and long enough to reach entirely through the canula. He has never been able to detect any general toxic effects upon the system, but believes that the action of strong carbolic acid on surfaces secreting albuminous fluids is to seal them, to shut them off from the system in such a manner that absorption can not readily take place. The occluding influence of strong carbolic acid he regards as an important surgical resource in certain cases of compound fracture,

destructively lacerated wounds and ulcerating surfaces, where septic infection is inevitable. All forms of serous cysts which are usually subjected to any form of operative treatment, on the principle of producing plastic adhesion on their walls, may be deemed amenable to the treatment indicated.—*Medical Record*.

TREATMENT OF COMEDONES.—The black points, fleshworms or comedones, which are found in the face, and especially near the nostrils, are not at all produced by the accumulation of the particles of dirt or dust, as has generally been believed, but by pigmentary matter which is soluble in acids. It is known, in fact, that black comedones which accompany acne often appear not only on persons exposed to dust or rather careless of their person, but also on chlorotic young girls who live in good circumstances. Besides, observation shows that the discoloration not only exists on the surface of old comedones, but descends always to the lower parts. Accepting this fact, Unna has used, successfully, acids in the treatment of comedones. He generally prescribes:

R.

Kaolin, 4 parts.

Glycerine, 3 parts.

Acetic acid, 2 parts.

With or without the addition of a small quantity of some ethereal oil. With this pomade he covers the parts affected in the evening, and if need be, during the day. After several days all the comedones can be easily expressed, most of them even come out by washing the parts with pumice-stone soap. The same results can be obtained by bandaging the parts affected for a long time with vinegar, lemon juice or diluted hydrochloric acid.

The author concludes by saying that the acids act like cosmetics, as they transform the black color into a brown and yellow shade, and destroy it gradually altogether; they produce a quicker desquamation of the horny bed which interrupts the exit of the comedones and brings to the surface the glandular openings.—DR. UNNA, of Hamburg.

ERGOT IN THE TREATMENT OF ULCERS ON THE LEG.—After narrating nine cases of ulcers on the leg of large dimension (*Cincinnati Lancet and Clinic*), Dr. Meyerhoff rec-

ommends the subcutaneous injection of fluid extract of ergot as a method of relieving the troublesome affection. The injection of about five drops was practiced every second or third day near the margin of the ulcer, in the midst of the enlarged veins and infiltrated tissues. The ulcers themselves were covered with a two per cent. lotion of carbolic acid, and the extremity enclosed in a flannel bandage. Eight injections were the largest number required in any case. The operation was followed by considerable pain, lasting from two to eight hours, but abscesses and other evil effects were never observed. Atrophy of the dilated veins ensued in all the cases, and a rapid and, so far as known, permanent cure resulted in every instance.—(*Ded. Wochensch.*)—*American Practitioner*.

DIFFERENTIAL DIAGNOSIS OF ABDOMINAL TUMORS.—Dr. Erich of Baltimore, contributes a very instructive paper to the Clinical Society of Maryland, wherein he points out how easily we may make very singular errors of diagnosis in abdominal tumors. He illustrates his views by the narration of several cases, hoping, apparently, to add to the "known sources of error" in arriving at a good diagnosis. In Case 1, a first examination per vaginam "revealed an irregular, hard, nodular tumor in the left iliac region somewhat posteriorly," and a diagnosis of probable cancer was ventured. A year and a half after this examination the patient was examined jointly by Dr. Erich and Dr. Chadwick, of Boston, when the conditions noted, had entirely changed. The tumor then noted, had disappeared, "and a firm, round, movable tumor, about the size of an adult head, was found occupying the hypogastric region." Present diagnosis—a fibroid. It was decided to remove the supposed fibroid by laparotomy. Upon making an incision and bringing the tumor in view, an exploratory puncture was made which yielded pure pus. The patient died, and a *post-mortem* revealed an abscess. This case teaches that fluctuation can not always be made out, even when a large amount of fluid is present. "I was compelled to acknowledge an error of omission," says Dr. E., "in not making an exploratory puncture before resorting to laparotomy. I have since then determined never to pronounce an abdominal tumor solid until after aspiration."

Case 2 had been pronounced by an eminent surgeon a solid uterine fibroid. All the conditions so indicated; but true to his determination, an aspirator needle was introduced by Dr. Erich, and to the surprise of himself, as well as others, "a pint of pure pus was withdrawn."

In Case 3 the patient had been sent to Dr. E. by a friend who had made out "probable diagnosis of ovarian tumor." The examination made by Dr. Erich appeared to exclude pelvic cellulitis and abscess—the diagnosis of ovarian cyst was therefore provisionally endorsed, and preparations for an operation were made. Preparatory to this a tonic treatment was set up, and a mercurial purge administered. The purgative produced diarrhoea with profuse and offensive discharges. Fever was established. The tumor was speedily reduced one-half. Aspiration, now instituted, removed a quantity of offensive pus and gas. The tumor was evidently a pelvic abscess.

In his concluding observations Dr. Erich remarks: "In view of these difficulties, which have been acknowledged by the best men in the profession as liable to occur to them, I think it advisable to use the aspirator in cases of doubtful abdominal tumor before pronouncing definitely upon its nature.—*Obstetric Gazette*.

LAUGHING-GAS AS AN ANESTHETIC DURING LABOR.—In a paper recently published in the *Archiv fur Gynakologie* Dr. Stanislaus Klikowitsch, of St. Petersburg, advocates the use of nitrous oxide for the purpose of obtaining anesthesia during labor. He has employed a mixture of four parts of nitrous oxide and one of oxygen, kept and supplied under a sufficient pressure to make its density the same as that of the atmospheric air. The author has a miniature gasometer in which he stores it; for obstetric purposes he carries it in an India-rubber bag, which he puts under the pillow of the patient. The advantages which he claims for it are the following; 1. Its use is quite free from danger either to mother or child, and it has no unfavorable effect in prolonging labor, contrasting in this respect advantageously with chloroform. 2. It, without doubt, does away with pain in all the stages of labor. 3. By means of this mixture complete anesthesia can be obtained without loss of consciousness, and, therefore, without diminishing the action of the voluntary muscles; the fullest possible power is thus available for the

expulsion of the child. 4. Absence of vomiting, and often, if vomiting has begun, relief to this symptom; absence, also, of any period of excitement, and of the after-consequences of anesthetics—nausea, headache, dyspepsia, etc. 5. The anesthesia can be continued throughout the whole period of labor, without any cumulative effect; since during the intervals of pain the effect of the preceding inhalations completely passes off. 6. The presence of the medical man is not indispensably necessary for the administration of this anesthetic. The chief objections to the use for this purpose of nitrous oxide are its comparative costliness, and that the gas and the necessary apparatus are not so portable as could be desired. We should be inclined to dissent from the statement which the author puts sixth in his list of advantages.—*Med. Times and Gazette*.

RECTAL EXPLORATION AND DIAGNOSIS.—Dr. Charles B. Kelsey, of New York, contributes an article to the *New York Medical Journal and Obstetrical Review* for October, 1881, which contains several valuable suggestions and the description of some methods which are original. After referring to the many errors which arise in this department of surgery from the lack of care and proper examination, he goes on to answer the question of how to make a rectal examination which shall be at the same time thorough and as free from pain as possible. In his own practice he uses an artificial light of his own arrangement and a forehead mirror, which enable him at all times to illuminate the rectum thoroughly, while by the side of the examining table stands an instrument-case fitted with all necessary appliances. In addition to these things he insists strongly on the necessity of having a water-closet communicating with the office, so that injections may be administered and the bowels moved at the time of the examination. In the matter of specula he confines himself almost exclusively to Sims's, finding this the best of all after the sphincter has been stretched, and not finding any that give a fair view of the parts until this has been done. He relies, however, much more upon the finger for a diagnosis than upon any artificial helps, and claims that with it, after the necessary skill has been acquired, the slightest pathological changes may be detected. In the matter of bougies he also has his own

preference, and recommends a soft-rubber instrument, similar to that of Wales, only more flexible. For detecting strictures high up in the rectum or in the sigmoid flexure little confidence is to be placed in a bougie of any sort, and the writer relies almost entirely upon manual examination either through the abdominal wall or by passing the hand into the rectal pouch. The latter method he holds to be free from danger and certain in its conclusions.

CAN THE SCHOOLS AFFORD TO ADOPT ADVANCED METHODS OF INSTRUCTION?—It is a strange fact, but, nevertheless, I think it is a fact, that the chief obstacle to the establishment of the higher grades of medical education comes from the medical schools. It has been truly said that with but a few exceptions, a commercial spirit pervades these bodies. It is the fee system that, as it seems to me, lies at the root of all the evil, and while this is perpetuated, I fear that there is little hope of betterment. It is not unnatural that those who are connected with the schools should be unwilling to see the large diminution in personal income that many claim would be the result of a change. But there is some room for argument on this point, and the experience certainly of one school does not lead to that conclusion. In the Harvard School—and I speak with certainty—there is more money received for instruction, and more divided to-day among the instructors, than there was when the fee system existed. The experience of the Harvard School on this point should, I think, be an incentive to others to try the plan.—*Dr. E. T. Caswell, Annual Address, American Academy of Medicine.*

HYPODERMIC INJECTION OF WATER IN THE TREATMENT OF PAIN.—In the *Gaceta Medica*, of Venezuela, Dr. Ponte relates his experiences in several instances in which he employed water hypodermically for the relief of pain. The first case was that of a boy who was suffering from an attack of intercostal neuralgia so severe as almost to endanger the life of the patient by interference with respiration. Not having any morphine with him, the author determined to work upon the imagination of the sufferer by injecting pure cold water over the location of the pain, a procedure which, much to his astonishment, was followed by permanent relief. Impressed with this

fact, Dr. Ponte resolved upon further experiments. The next case was one of toothache. In order to eliminate the imaginative element, he informed the patient of the treatment to be employed, for the execution of which permission was rather reluctantly given. An injection practiced upon the side of the face nearest to the pain was followed by considerable ardor, but in less than a minute the odontalgia had subsided. Animated with these results, he employed cold water in a variety of pains, always with happy issue, even in cases where morphine had been the drug previously administered. Another patient had been suffering nine years from intense gastro-intestinal neuralgia, which baffled all remedies. The pain came on after meals, and its violence was such as to cause her frequently to faint. When first seen by the writer, she was utterly prostrated. Two injections relieved the pain, and subsequent tonic treatment restored her to perfect health. Several hundred cases have been treated in the manner described, with good results. No explanation is given as to the action of the remedy.—

Medical Record.

EXCISION OF THE KNEE IN EARLY LIFE.—From a paper on this subject Dr. William Stokes draws the following conclusions:

1. Excision of the knee should not be looked on as a last resource, but should be undertaken, if possible, before any profound organic changes take place.

2. Expectant treatment, to be efficient, must be undertaken at an early stage of the disease, and extend over a period of at least two years.

3. No better result than ankylosis can be looked for by this method.

4. In a patient with a predisposition to secondary tuberculosis developments the possibility of the recurrence of disease after expectant treatment must be borne in mind.

5. In cases attended with prolonged suppuration the chances of the occurrence of visceral, especially renal, disease must not be lost sight of.

6. Where the skin is unbroken, the disease limited, an efficient method of fixation applied, and a rigid system of antiseptic dressing of the wound adopted, primary union may in the majority of cases be anticipated.

7. When these latter conditions are fulfilled excision of

the knee-joint can not be longer regarded as the formidable procedure it was formerly held to be.

8. The alleged unfavorable results of excision of the knee-joint in early life are opposed to more extended clinical experience.—*British Med. Journal*.

BRESGEN ON CHRONIC CATARRH OF THE NASAL FOSSÆ AND PHARYNX.—Dr. Bergen (*Annales des Maladies du Larynx, etc.*) enumerates the causes of this affection as frequent colds, enlarged tonsils, elongated uvula, abuse of tobacco, snuff, and the vitiated atmosphere of warm rooms. Syphilis, he says, is not a cause, as it only affects the nose when it is previously the seat of catarrh. Among the symptoms he insists on the importance of bleeding and redness of the nose as certain signs of commencing chronic rhinitis. His treatment consists in the insufflation of powdered nitrate of silver and starch (0.5 to 10 per cent.), and in obstinate cases he applies the galvo-cautery. He seldom resorts to injections, except in cases attended with much fetor, and condemns the use of the plug recommended by Gottstein. To facilitate the inspection of the posterior nares, he inserts the index finger of the left hand—preferring it to the hook of Voltolini—to draw the palate forward. To overcome the hyperesthesia of the palate, fauces, etc., frequently present, Dr. Bresgen paints the parts with iodide of glycerine (iodide 0.5 to .1, iodide of potassium 2.5 to 5, glycerine 25), and affirms that in three applications a sufficient degree of insensibility is obtained. During these applications the patient is forbidden the use of tobacco, alcoholic drinks, and strongly-spiced food.—*London Med. Record*.

DRAINAGE OF THE PERICARDIUM.—A case, probably unique in the annals of paracentesis, has been recorded by Rosenstein, of Leyden. A child, aged ten years, suffering from pericardial effusion, presented such a degree of interference with circulation and respiration, that an aspirator needle was passed into the fourth intercostal space, near the sternum, and 620 cubic centimetres of liquid were withdrawn. Left-sided pleural effusion soon followed, and 1100 cubic centimetres of liquid were evacuated. The cardiac symptoms increased, and necessitated a second puncture of the pericardium; 120 cubic centimetres of purulent liquid were withdrawn. A relapse occurring, a larger opening was made (an inch and a half long; in

the fourth intercostal space. The soft parts were divided layer by layer under strict antiseptic precautions. When the pericardial cavity was reached a large quantity of pus escaped. Two drainage tubes were inserted. The operation was followed by an immediate return of the circulation and respiration to normal conditions. An incision into the pleura, however, also became necessary. At the end of four months of treatment the patient left the hospital in good condition. There was no pyrexia or œdema of the skin in the præcordial region to indicate the purulent nature of the effusion.—*The Lancet*.

MALTINE.—In all diseases of general debility, wasting or atrophic affections, and in nearly all varieties of indigestion, maltine is a therapeutic auxiliary, the most valuable I have as yet encountered, and I am daily more and more convinced of its advantages. With the long and very extensive practical experience I have had of its value, I would be at an infinite loss to replace it in my daily practice, now that my confidence in its real merits has been so fully established. As a nutritive tonic I use it exclusively in the place of cod liver oil, and alone or in emulsion with the latter, I deem it a most important and useful therapeutic agent in pulmonary affections; and, as I have said before, in neuralgia, epileptiform complications, many varieties of paralysis, chronic and numerous other neurotic affections, I have found it a most important adjunct when combined with the standard remedies usually administered in such cases. In many perversions of nutrition, such as the atonic and nervous varieties of dyspepsia, maltine has a most happy effect, correcting functional gastric disturbance, improving digestion, promoting assimilation and *rapidly increasing bodily weight*.—*St. Louis Medical and Surgical Journal*.

CREDE'S METHOD; EXPRESSING THE PLACENTA.—Crede's method consists essentially in applying at first light and afterward stronger friction to the fundus uteri till an energetic contraction is obtained; at its height the uterus is grasped, so that the fundus rests in the palm of the hand with the fingers to the front. The exercise of circular compression forces the placenta from the uterus, or in case of failure, the process may be repeated until the object is accomplished. It is true that the expulsion of the placenta will, as a rule, occur spontaneously. The

unaided uterus is, however, liable to relax and become the source of hemorrhage; or where the delivery does not take place speedily, it may, on the other hand, close down so as to imprison the placenta within its cavity. When Crede's method is systematically practiced, the bugbear, known as adherent placenta, is the rarest of accidents. Expression should be practiced only during a contraction, and the force should be directed downward in the axis of the uterus. Spiegelberg lays great stress on exercising compression of the uterus from the moment the head emerges from the vulva.—*Lusk, quoted by Louisville Med. News.*

TREATMENT OF HERPES ZOSTER.—John Boardman, M. D., reports the following in the *Buffalo Med. and Surg. Journal*.

Case.—M. D. came into my office with an interrupted band of herpes zoster, extending on the right side of the vertebræ to near the pubis, which he discovered two days previous. I ordered him to use the following prescription:

R _y	Carbolic acid,	ʒii.
	Ol. oliv,	ʒi.

Sig.—Rub well on the parts two or three times daily.

I did not see him for a week, when the eruption had disappeared, only a few dry crusts remaining. He stated that after the second application the burning of the parts was relieved.

My purpose in this brief report is to direct the attention of the profession to the use of carbolic acid in the treatment of "shingles," as it has been very successful in my hands.

CASE OF EPILEPSY PRODUCED BY REFLEX IRRITATION.—The following is from the *St. Louis Courier of Medicine*: W. S., a boy aged eleven years, had been suffering from epileptic attacks for several years, which came on at different periods. The boy was rather emaciated and of very nervous temperament. On examining the boy's penis, I found he had phimosis, with a very small preputial opening. He told me that sometimes when urinating the prepuce swelled up by the urine which collected, and could not empty as fast as it came from the urethra, causing him some pain, which, however, he never told his parents.

I then advised the parents to have the boy circumcised, which would materially help, if not entirely cure, this terrible disease of their son. They consented. The next day I performed the operation, having the patient under the influence of chloroform. The wound healed without trouble. From that day his nervousness grew less and less; he has had no other attacks; to-day, one year and a half after the operation, he is stout and fleshy.

SULPHUR FOR PIMPLES ON THE FACE.—Dr. Gage Parsons believes that Mr. Erasmus Wilson was the first to propose sulphur lotion in *acne punctata*, according to the *Practitioner*. The usual lotion of the flowers of sulphur with glycerine water is a valuable remedy, but from the readiness with which the sulphur separates it is inelegant and inconvenient, while it is not quite satisfactory in its results. A far more efficacious mode of using sulphur is to dust the face with pure precipitated sulphur every night with an ordinary puff used for toilet purposes. Recently two severe cases of *acne* of two years' standing, which had resisted the ordinary methods of treatment, yielded at once to sulphur thus applied. If the sulphur be scented with oil of lemon or roses it will form an elegant cosmetic.

THERAPEUTICS OF ANEMIA.—In his Gulstonian Lectures upon Anemia, Dr. Sidney Copeland showed that iron acted with great rapidity in enriching the blood with corpuscles. He has found arsenic in some instances more efficacious than iron, and as an hemantinic ranks it next to that metal. Phosphorus has been given with benefit to a case of idiopathic anemia. Quinia, strychnia, and the mineral acids were of value as aids to iron. Manganese is a dead failure. Oxygen increases appetite and assimilation, but is not hemantinic directly. Transfusion, as a last resort, must be used in pernicious anemia before the patient is very far gone. He thought well of the use of defibrinated blood by the rectum systematically.—*Louisville Medical News*.

SUDDEN DISLOCATION OF THE LIVER—RECOVERY.—Dr. A. Y. P. Garnett (*Am. Jour. of the Medical Sciences*) reports a case of sudden dislocation of the liver. A lady, aged fifty, while stooping down hurriedly to pick something from the floor felt a sudden wrench or giving away on the right side. Examination revealed a displaced liver reaching

to the crest of the ilium. Much discomfort was experienced, but the patient was relieved by spontaneous reduction in the space of three days. A week's confinement in bed, followed by the use of a broad elastic band around the waist, constituted the remaining necessary treatment. The patient apparently regained to a great extent her normal condition and state of health.

THE USE OF HOT WATER IN DISEASES OF THE EYE.—Dr. Learntus Connor, *Am. Jour. Medical Science*, speaks very highly of the frequent local application of hot water to the eyes in cases of acute conjunctivitis and blepharitis, and also in chronic hyperemia, granular inflammations, iritis, and corneal affections, in which he has used it with great success. The water should be as hot as the patient can comfortably bear with his hand. The patient leans over the basin and applies the water to the eye for a few minutes, from three to twelve times a day, according to the urgency of the case.

INJECTIONS OF BROMIDE OF POTASSIUM IN GONORRHOEA.—In eighteen patients under observation there was noted in fifteen a rapid diminution or complete suppression of the erections. The injections are not very painful. They are used five times a day, the last injection being practiced just before retiring. They should be retained in the canal one or two minutes.

The following is the formula: Water, 150 grammes; Glycerine, 10 grammes; Bromide of Potassium, 6 grammes; Laudanum, 2 grammes.—*Journal de Therapeutique*, October, 1881.

BOOK NOTICES.

AN INDEX OF SURGERY.—Being a Concise Classification of the Main Facts and Theories of Surgery. For the Use of Senior Students and others. By C. B. Keetley, F. R. C. S., Senior Assistant Surgeon to the West London Hospital, etc. 8vo. Pp. 320. New York: William Wood & Co. Cincinnati: H. Stacey.

As the preface states, this work is intended to be read by the senior student shortly before he goes in for his final examination, and after he has carefully studied a complete text-book of surgery. Probably the scope of

the work will be better understood by stating that it contains such essential matter as a person would note down while reading a treatise upon surgery, for the purpose of reviewing afterwards, when about to prepare for final examination, either as a candidate for graduation, or as a candidate for the position of interne to a hospital.

A student in possession of such a work would be saved much time and trouble in taking notes, for it would be just such a note-book as he would need, differing only from one he would make for himself, if he did not have it, by being much more carefully prepared by one who has full knowledge of what would be needed.

But not only the student, but the practitioner, also, will often find the book useful as a handy little work of reference.

A CLINICAL HANDBOOK ON THE DISEASES OF WOMAN.—By W. Symington Brown, M. D., Member of the Gynecological Society of Boston. 8vo. Pp. 247. New York: William Wood & Co. Cincinnati: H. Stacey.

The author does not claim for his work to be a complete treatise on gynecology, but states that it is intended to be a practical guide on most of the diseases peculiar to women, for the use of medical students and country practitioners. He has, therefore, endeavored to concentrate the best that has been written on each subject. The work is consequently small in size, but sufficiently large to give a very satisfactory description of the various diseases which are considered, and their treatment. There is a freedom from verbiage and a conciseness that will certainly be quite agreeable to all who desire to get at the gist of a subject as soon as possible, and to learn what there is to be learned about it. The work will undoubtedly prove highly acceptable to a large class of practitioners, especially among those, who do not make diseases of women a specialty.

The author is very correctly of the opinion, and acts upon it in his treatment of them, that in diseases of women sufficient account is not taken of mental phenomena. Many patients, he says, are mentally diseased who would scarcely be proper inmates of a lunatic asylum. "We meet with cases in which credulity is carried to an extent scarcely compatible with sanity. Hence an additional reason for early attention to female complaints."

EDITORIAL.

REMARKABLE PROCEEDINGS OF THE NEW YORK STATE MEDICAL SOCIETY.—At the meeting of last year, the *New York State Medical Society* appointed a committee to revise the *Code of Medical Ethics*, adopted by the AMERICAN MEDICAL ASSOCIATION, and accepted by all Medical Societies, in the United States, in affiliation with that organization. At the meeting which commenced its sessions in Albany, February 7th last, the committee, consisting of Drs. Wm. C. Wey, C. R. Agnew, S. Oakley Vanderpoel, Wm. S. Ely, and Henry G. Piffard, presented a draft of a *Code of Medical Ethics* as a substitute for the old Code.

This new Code was presented during the morning of the first day's proceedings. On motion it was made the special order of business of the evening session. One of the articles reads as follows: "Members of the Medical Society of the State of New York, and of the Medical Societies in affiliation therewith, may meet in consultation legally qualified practitioners of medicine. Emergencies may occur in which all restrictions should, in the judgment of the practitioner, yield to the demands of humanity.

"To promote the interests of the medical profession and of the sick, the following rules should be observed in conducting consultations." Then follow pretty much the same directions as is contained in the existing Code recognized by all medical societies.

Inasmuch as the proposed new *Code of Ethics*, contemplated such an innovation as permitting consultation with irregular practitioners, it naturally called forth general expression of opinion. Dr. Roosa, of New York, as a substitute to the report of the special committee, offered the following:

"The Medical Society of the State of New York, in view of the apparent sentiment of the profession connected with it, hereby adopts the following declaration, to take the place of the formal Code of Ethics, which has, up to this time, been the standard of the profession in this State.

"With no idea of lowering, in any manner, the standard of right and honor in the relations of the physicians to the public and to each other, but, on the contrary, in the belief that a larger amount of discretion and liberty in individual action, and the abolition of detailed and specific rules, will elevate the ethics of the profession, the medical profession of the State of New York, as here represented, hereby resolve and declare,

"That the only ethical offenses for which they claim the province to exercise the right to discipline, are those comprehended under the commission of acts unworthy a physician and a gentleman.

"*Resolved, also*, That we enjoin the County Societies, and other organizations in affiliation with us, that they strictly enforce the requirements of this code."

The substitute received thirty-nine yeas and thirty-seven nays. The President ruled, however, that it was an amendment to the By-laws, and required a two-thirds vote, and, therefore, he declared it lost.

The report of the Committee was finally adopted by a two-thirds vote, after the entire evening had been devoted to its discussion.

As a matter of course, this action of the New York State Society places it outside of the pale of all regular medical societies. All the medical societies of this country have adopted the *Code of Ethics* of the American Medical Association. An article of the Code requires its adoption by a medical society in order to have representation in the Association; and as they have all acceded without an exception, for a society to withdraw its acceptance of it, and substitute another in its stead, containing provisions antagonistic of its provisions, is to ostracize itself and its members. As the NEW YORK STATE MEDICAL SOCIETY is made up of delegates from the county societies of the State, if these acknowledge the State Society by continuing hereafter to send representatives, or in any other way assent to these proceedings, they will incapacitate themselves to be represented in the American Medical Association. We will look forward with no little curiosity to the coming meeting of the Association in regard to the course that will be taken by the regular profession of the country.

The *Medical News*, of Philadelphia, has the following to say in regard to the action of the New York State Society.

"In view of the fact that the new Code of Ethics of the New York State Medical Society is in direct antagonism to the views which the Society has held, without expressed dissatisfaction, for over a quarter of a century, and to the long-standing code accepted by every regular medical society in the United States, the question may well be asked, Was not its adoption on the same day that it was presented and for the first time made public, and without the members having had the opportunity to learn the views concerning it, of the constituency they represented, both precipitate and unwise?"

"It remains to be seen how far the sentiment of the four thousand five hundred regular physicians of the State is correctly represented by the hasty action of the fifty-two gentlemen whose votes have given them this new code, and isolated them from the profession of the country.

"While a New York State Medical Society by the adoption of its new Code of Medical Ethics has deliberately severed its relations with the

American Medical Association and the entire profession it represents, its action does not seem to be received with enthusiasm by the New York State Homœopathic Society, to whose members it has extended the hand of affiliation. Dr. Talcott, in his Presidential Address before the State Homœopathic Society, at its annual meeting in Albany, referred to 'the remarks made by Dr. Jacobi, President of the Allopathic Society, at its meeting last week, assuming that the homœopathic school was deserting its principles for the sake of affiliating with their brethren of the dominant school, which he said was dominant no longer, as shown by their offer to consult with their formerly despised brethren. What has wrought this? Has Mohammed gone to the mountain, or the mountain come to Mohammed?'"

The *New York Medical Times*, a homœopathic journal of New York City, makes the following comments upon the action of *New York State Society*:

It will thus be seen that the "Old School" has thrown down its "arms" and declared an end to hostilities within the Commonwealth so far as it is concerned!

The question now arises, how shall we of the "New School" conduct ourselves under the changed circumstances; shall we continue to fight or shall we accept the situation in the temper in which it is offered? It seems to us that the true spirit which impelled such action on the part of a body so largely in the majority demands our careful consideration and appreciation. We may well consider the desirability of doing away with our distinctive adjective, thereby avoiding the suspicion of "trading upon a name." There can be no restriction placed upon individual opinion and action under such conditions, and it is useless to assert the contrary, for all are left free to do and act as conscience and ability shall dictate, only maintaining that dignity which our position demands!

President Jacobi, in his annual address before the State Society which adopted the new code, said:

"It is generally asserted by many that there are good reasons for abolishing the boundaries between the several classes of medical men altogether. I do not speak of schools of medical men, for modern medicine is not divided into schools. The homœopaths claim that they do not differ from us any longer, do not mean to differ from us, as formerly they did and proudly claimed to do. If we have a reason to believe not only that medical science is one and indivisible and based on logic and experimentation, but that we, the profession of the State of New York, are sufficiently imbued with that spirit of logic and experimental science, characteristic of modern medicine, we may overlook differences and meet with a spirit of reconciliation those who do not encounter us any more, so they say themselves, with the dicta of a school, or a sect, but who claim that each individual man amongst them stands on his own feet and does his own thinking. A crowd of men facing the profession with the battle cry of '*similia similibus*' and 'no quarter,' exclude themselves and can not expect kind treatment at our hands. When the ranks, however, are dissolved and no *corps d'esprit* makes them raise the flag of hostility, and instead of a fighting army under orders, men come into your camp for reconciliation and a parley, the case is different."

We regret to observe that Dr. Jacobi has failed to recognize the true position of affairs as he will sooner or later find out. We have always, and still continue to claim, that we do not differ from the "Old School," excepting that we have added the homœopathic plan of selection of the remedy, and he may rest assured that we shall continue to practice homœopathically whenever "the result of experience" shall indicate that as the proper mode. As physicians, we are at perfect liberty, and always have been, to select that mode of treatment which the exigencies demand, and we no more practice homœopathically in every case than we do chemically or surgically. It is undoubtedly the province of the true physician to select such methods of treatment as his experience shall dictate, independent of

any dogma or theory whatever, and no conscientious scientist will exclude himself from the investigation of a subject because of unbelief or prejudice. When the "Old School" will openly admit the study of *materia medica* according to the pure effects of drugs upon the healthy human body, and that this action is dual in character—thus adopting a dose sufficiently infinitesimal for any rational homœopathist—then it will have silenced the guns of homœopathy as a sect, through the absorption of its fundamental principles. That this state of affairs is rapidly coming about, the current literature of the subject amply justifies our asserting.

The laymen are taking much interest in the progress of this question, as they ought. The *Albany Argus* said editorially, in respect to the new "code" that it was "A great step in advance."

If our "Old School" colleagues desire affiliation with us after a full understanding that we insist upon the proving of drugs upon the healthy human body as the only substantial basis of a *Materia Medica*, that we recognize the dual action of drugs, and that the selection of the dose must depend upon the action desired—whether primary or secondary—then we are perfectly ready to join hands and hearts in that grand work which should stimulate us all to earnest co-operation.

The question of the universality of the law of cure seems to be a stumbling block to most of those who attempt the elucidation of our subject. As we understand it, the term universal applies in this connection only to the principle with which it stands involved.

It was never contemplated in the use of this adjective to attempt thereby to force the application of the law beyond its own sphere, even by inference. The law of similars is just as universal as any other *law*, reaching no farther than its own impassable boundaries, and it can not be made to apply to the laws of chemistry, astronomy, or any other of the equally natural laws which govern the universe.

If we will insist upon this definition, our friends of the "Old School" can no longer charge us with dishonesty, and can not demand that we shall practice homœopathically exclusively. We claim that the whole domain of medicine is as much ours as theirs.

The display of the title "Homœopath" upon signs is rarely met with in these parts, and its use, we will admit, is only for purposes of notoriety and should be abandoned by such as have any degree of appreciation of good taste and of the dignity of that title which needs no modification, viz., *Doctor of Medicine!*

It may be that our logical faculties are defective, but it occurs to us, in a very forcible manner, that by the action of the *New York State Medical Society*, there is a complete surrender to homœopathy by the members of that Society. These men have been crying out, "quacks," "quacks" when speaking of homœopathy for years, and "turning up their noses" in contempt; but now in their Society they style them "legally qualified practitioners of medicine," and assert the propriety of consulting with them. Oh consistency, thou hast not thy dwelling-place in man! To-day he exclaims with indignation, "Is thy servant a dog that he should do such a thing?" and to-morrow he proceeds deliberately to do it, and takes merit to himself for doing it. We have nothing to say against

homœopathists, and never had. We respect the honest homœopathist who sincerely believes in his dogmas, but we have little respect for the majority of the men of the New York State Medical Society.

A correspondent in the *Medical Record* exceedingly well exemplifies the difficulty in the way of regular physicians and homœopathists consulting. The impediment is as much on one side as upon the other. We quote:

"Let us suppose a case. A gentleman occupying a good social position, and usually attended by a homœopathic practitioner, is taken ill with severe malarial remittent fever. He is alarmed, and asks for a consultation with Dr. Pimento or Dr. Corundum. These gentlemen declining, Professor Janus is prevailed upon, by motives of humanity and regard for an influential patient, to attend. Such a sequence as the following may occur. They make together their visit to the room of the patient; all inquiries and examinations are completed, and they retire to the library, with closed doors.

SCENE.

DR. LACTIN.—An ill man, doctor, is he not?

DR. JANUS.—Decidedly so. You know him well, I suppose; condition sound, I hope? Habits good?

DR. LACTIN.—Pretty fair. No more champagne than his neighbors, I believe. Only about sixty years of age.

DR. JANUS.—I don't like that crepitant rale. It complicates the matter badly. What have you been—has he been—ah, excuse me; I forgot, for a moment, your position. We agree in the diagnosis, I believe?

DR. LACTIN.—Entirely: remittent, with pneumonia, early stage, right lung. Very high fever, and active delirium; 106° in the axilla. I confess I don't like it, doctor.

DR. JANUS.—Well, what are we going to do?

DR. LACTIN.—What would you do?

DR. JANUS.—Five grains of quinine every two hours, doctor, for four doses; dry cups to the right side, followed by a large poultice; and then—

DR. LACTIN.—The poultice, well. But do you suppose it possible that a disciple of the immortal Hahnemann can give an unattenuated grain of quinine, even to an elephant or a whale?

DR. JANUS.—Why, no, sir. I beg you pardon, sir. Of

course not. You must be consistent; I honor your consistency. You will do exactly what you please. Will he leave a large estate?

DR. LACTIN.—Two millions, they say. A large family, however, besides the wid—I should say the wife.

DR. JANUS.—Well, I have an appointment at twelve; I must go.

DR. LACTIN.—I will ask a favor of you, doctor. I am greatly obliged for this consultation, I assure you. Will be glad at any time to reciprocate. Please do me the further kindness to communicate your prognosis to the family, will you?

DR. JANUS.—Certainly; with much pleasure.

DR. LACTIN.—And also our agreement in diagnosis?

DR. JANUS.—Certainly.

DR. LACTIN.—I am very much obliged to you.

(*Exeunt*, shaking hands cordially, and going down stairs together.)

“Putting this into sober English, it appears to be obvious that the only common ground upon which a regular physician can stand with a homœopath, in the consideration of a case of disease, is the province of diagnosis and prognostication. Since the latter, moreover, is conditioned in part upon the results of treatment, diagnosis is left as the only region wherein there can be conceived between them any rational *modus vivendi*.

“For the realization of this in practice better than a consultation, as not like that involving any recognition of the professional claims of the homœopathic attendant, will be, in every instance, a *pecially arranged visit*, simply for diagnostic examination of the case by the consultant, in the absence of the practitioner who has charge of the treatment of the case. Even this will be repugnant to most members of the profession; but it may be properly open for consideration whether this much might not be, in certain instances at least, conceded to the often unreasoning demands of the public at large.”

DISORDERS OF THE BRAIN IN DYSPEPSIA.—At the session of the Societe de Biologie, May 21 (rep. in *Le Progres Medical*, No. 22), M. Leven made a communication on the brain troubles in dyspepsia. He had a hundred observations that demonstrated to him the existence in dyspepsia

of cerebral commotion. He had seen patients struck suddenly in the street with veritable apoplectic attacks, lasting ten minutes or a quarter of an hour; they were supposed to be epileptics, but were in reality only dyspeptics, in whom the cerebral accidents subsided completely as soon as the digestive functions were re-established. In the dyspeptics the intelligence remains intact; there is never any mental alienation; certain cerebral faculties may be altered or obscured, so to speak, but the ego remains entire and the patient controls himself in his disorder. The disorder of the higher mental faculties, the enfeeblement of the will, of the activity, of the memory, of the power of speech, are easily observed. Some patients are incapable of determination; they need an effort to perform even ordinarily instinctive actions, such as to recover an object they have accidentally dropped; in them the memory is defective and speech difficult, especially after eating. A general sadness overcomes them, everything becomes dark; but, unlike the subjects of hysteria, they generally present a cutaneous hyperæsthesia, but never anæsthesia.

In the discussion of M. Leven's communication, M. Laborde took some exception to its conclusions. Certainly he did not deny the influence of disorders of the stomach upon the brain, and no one cares to discredit the symptoms of anæmia of dyspeptic origin; but it may be that M. Leven has made a slightly forced interpretation of his results.

There are many persons in whom the digestive disorder is dependent upon nervous disease, and it is straining a point somewhat to seek to find in the stomach the point of departure of all the phenomena. He had had under his care a dyspeptic woman, who had simultaneous delirious ideas of fear of being bitten by a mad dog, which soon increased to the dread of contact with any one who had touched a dog; finally, it extended to the fear of contamination by aliments, and at last the patient became almost entirely insane.

M. Leven said, in reply, that that case was simply one of insanity, while he spoke only of hypochondriacs, who, however they are spoken of by alienists and others who have so far studied them so ill, are not demented; they possess their intelligence and ought not to be ranked with lunatics.

M. Laborde asked, then, what proof could be given that certain hypochondriacs were not insane. That a well-directed dietary course might improve them is possible, but that it is no reason for saying that the stomach is the point of departure for all the symptoms. It is necessary to observe a patient a long time to see a mental affection, partial in its beginning, degenerate into dementia.

DEATH OF CENTENARIANS.—The *Pacific Medical and Surgical Journal*, of San Francisco in February, 1881, issue, makes the following statement:

"The deaths of 13 centenarians were recorded in the *Ledger* during the year 1881 (four more than in 1880); of these there were ten women and three men: Annie Granleas, Kate Kelly and Rachel Mahorn, aged 100; Mary Winn, 101; John Monaghan, Hugh Lynch, Mary Miller and Sarah McKay, 102; Elizabeth Guin, 104; Daniel Webster, 105; Hester Reckless, 105; Margaret Gasaway, 106; Daffy Burton, 115. Six of these died during the first half of the year, and have heretofore been noticed. The others are Annie Granleas, widow of the late Thomas Granleas, who died suddenly, September 12, aged 100 years; she was buried from the residence of her grandson, William Rahlfling, on September 16; Mary Miller, who died November 14, at the residence of her son, John N. Miller, No. 1231 South Thirty-first street, aged 102 years. She is said to have boasted that she once cooked a breakfast for General Washington, but that is hardly likely, unless she learned cooking very young. Catherine Kelly died November 26, aged 100 years, at the residence of her daughter, 207 Diamond street. Mrs. Kelly was a native of County Derry, Ireland; she came to this country in 1853, and was the mother of eight children. Margaret Gasaway died on December 6, aged 106 years. She was a member of the Society of Friends, and came here from the Eastern Shore of Maryland, while she was quite young. Mary Winn died December 23, aged nearly 101 years. She was a native of the old District of Northern Liberties, where she lived all her life, her husband, Jacob Winn, being one of the old-time night watchmen. She was the mother of ten children, the oldest survivor of whom is a daughter over 73 years old. Rachel Mahorn, widow of John Mahorn, died December 10, aged 100 years. She

was born in Salem County, N. J. She left 3 children, 20 grandchildren, and 23 great-grandchildren. Daniel Webster, colored, died December 25, aged 105 years. He left 4 children, 13 grandchildren, and 13 great-grandchildren."

THE WITHDRAWN SUIT AGAINST PARKE, DAVIS & Co.—In regard to the suit brought against Parke, Davis & Co., of Detroit, by Allen & Hanbury, of London, England, through their agents in this country, Schieffelin & Co., of New York, which we noticed in a recent number of the *MEDICAL NEWS*, we find the following remarks in *Virginia Medical Monthly*: "The very fact that suit has been brought against Messrs. Parke, Davis & Co., under such circumstances as are stated, furnishes, at least, moral evidence that their preparation of 'Tonga' has a larger demand, and hence is a more satisfactory preparation of the drug, than that prepared by the London house. There are enough of straightforward, honest practitioners who are more anxious to cure or else to benefit their patients than there are those who are mere sycophants, in order to secure some reward. We believe the profession of this country will oppose such a means of redress, if any illegal injury has possibly been committed. Professional opinion will always be, 'Let the fittest survive.' The energy and ability of the Detroit house, which has done so much to advance the interests of American pharmacy and for American practitioners, should be remembered. We wish we could persuade the New York house 'to get from under' the result of such a suit as they, as agents, are bringing."

Messrs. Schieffelin & Co., as we announced in our February number, "have gotten from under."

We have noticed that Messrs. Parke, Davis & Co. are being attacked in some of the medical journals by a Dr. H. R. Bigelow, of Washington. We feel quite sure that they have nothing to fear from his attacks. We feel sure that his income is greater from his writings than from his practice.

DR. JOSEPH PANCOAST.—Dr. Joseph Pancoast, the eminent physician and authority on surgery, died in Philadelphia recently of pneumonia, at the age of seventy-seven. Besides leading as a general practitioner, he was celebrated for a number of new operations in surgery

which he first introduced. One of these was the restoration of lost eyebrows by a flop of the scalp with the soft, drooping hairs of the temples. Another discovery he made was that by cutting the posterior muscles of the velum palati at a certain point, a lost voice could often be restored. In amputating at the hip joint he used the abdominal tourniquet with a large roller compress over the lower end of the aorta, thus shutting off all the arterial blood from the lower limbs. This operation he performed with success upon a large, heavily-built man, at the Pennsylvania Hospital, in June, 1860. The patient lost but three ounces of blood, and rapidly recovered. The plan thus devised by Dr. Pancoast is now practiced by the entire surgical profession throughout the world. He had a quick and sure hand, and what seemed like boldness was really a wonderful instinct which seldom failed him. In 1844 he published his treatise on surgery, of which in ten years nearly half a million copies were sold. He was Emeritus Professor of Anatomy in the Jefferson Medical College.

ABATEMENT OF THE SMOKE NUISANCE IN CINCINNATI.—The ordinance prohibiting the further defilement of the air of Cincinnati with smoke went into effect with the new year, and vigorous measures have been taken to secure its enforcement. It is very gratifying to learn that the manufacturers, the chief offenders against the regulation, are themselves now found willing and even pleased to promote this great and salutary reform. According to the report of the official inspector, "they all mean what is right," and "seem anxious to know what smoke consumers to get." "In every instance," the inspector reports, "he has been met in the kindest manner" by those upon whom he called to give notice of the enforcement of the law, and he believes that, "everybody being interested in having the nuisance of soot abated, will do his best to that end, and the result will prove satisfactory to all concerned." Much of this good feeling is believed to be due to the tact of Mr. Olhaber, the inspector, himself, but chiefly to that admirable public spirit which pervades Cincinnati, and takes precedence in the minds of her citizens in the aggregate over the selfish interests so painfully common to the people of most other American cities.

WE have received the EIGHTH ANNUAL REPORT OF THE SUPERINTENDENT OF THE CINCINNATI SANITARIUM, located at College Hill, near Cincinnati.

This is a pay institution for the treatment of cases of insanity, and diseases of the nervous system. The Superintendent is Dr. Orpheus Everts, whom we have understood was formerly connected with the Lunatic Asylum at Indianapolis. The total number of persons treated during the year was 134. The daily average under treatment for the year was 47.45.

The building is a large and apparently well constructed one, formerly a female seminary. As to its appurtenances we are not familiar; for, although we visited it a few months ago, we saw little more than the parlors and sitting-rooms, for the entertainment of visitors, which were very pleasant. If, however, it is in possession of all the appliances, essential for the proper treatment of the class of patients for which it is designed, it will fill a great want. The great objection to private or pay institutions for the treatment of the insane is, that they are conducted on too economical principles. Those who have invested capital in them are naturally anxious for as large dividends as possible, and, consequently, in order to render the management as little expensive as possible, fail to properly man them in order to be efficient for treatment, and to be able to administer to the comfort of patients. They are never, however, negligent in charges. We have no reason to believe otherwise than that the *Cincinnati Sanitarium* is conducted on the most liberal plan.

VACCINE APPLIED TO SHEEP.—A Paris dispatch to the London *Times* states that at a farm near Melun experiments were recently made by M. Pasteur in the presence of a host of specialists on the duration of the action of anthratic vaccine as applied to sheep. It will be remembered that six months ago M. Pasteur vaccinated a number of sheep with anthratic vaccine, the immediate result being to preserve all these sheep from anthratic virus, whereas sheep not so vaccinated succumbed within twenty-four hours to the latter. The question was how long the influence of such vaccine would last. The new experiments proved that it lasts six months, and they will be continued from month to month to ascertain the exact duration of the preservative. Four unvaccinated sheep were

inoculated with anthracic virus, as also four of the sheep vaccinated six months ago. Two of the unvaccinated sheep expired within twenty-four hours, and the other two subsequently, whereas the sheep vaccinated six months ago admirably resisted the action of the virus. Another curious fact was ascertained. A lamb, the offspring of a vaccinated sheep, was inoculated with the virus. It expired within twenty-four hours, thus proving that the vaccine virtue is not transmitted hereditarily.

The Seine-et-Marne Agricultural Society presented M. Pasteur with a gold medal, and a banquet was held at which the great service rendered to agriculture by his discovery was warmly testified to.

HOMŒOPATHY AND THE BRITISH MEDICAL ASSOCIATION.—The Southwestern Branch of the British Medical Association does not, apparently, intend to allow the question of the relations existing between homœopathic practitioners and the Association to remain in its present unsatisfactory state. The subjoined resolutions were passed unanimously at the last quarterly meeting of the Branch, held at Plymouth, on December 31, under the presidency of Dr. Hudson, of Redruth:

"1. That this meeting desires to express its entire disapproval of the views, in relation to consultations with homœopathic practitioners, expressed by the readers of *Addresses in Medicine and Surgery* at the annual meeting of the Association at Ryde, in 1881.

"2. That this meeting desires to direct the attention of the Committee of Council of the Association to the resolutions in regard to homœopathic practitioners passed at the annual meeting of the Association in 1852, and reaffirmed at the annual meetings of 1858 and 1861; and now calls upon the Committee of Council to put in force as speedily as possible By-laws 3 against homœopaths and all members of the profession who assume designations implying the adoption of special modes of treatment."

A LIMITED PARTNERSHIP IN THE NOSTRUM TRADE.—It is reported that the greatest amount paid for advertising by any establishment in the United States, is by a liniment manufacturer in Baltimore, who pays \$200,000 a year. The liniment man no doubt got his formula from a doctor,

which is commonly the first step in this line of quackery. Then comes the immaculate civilizer—the newspaper—nearly always purchasable as a trumpeter of false claims and fictitious certificates. Lastly the druggist takes a hand in the final distribution. In this triune nostrum business the druggist is a non-resistant, submitting with a meekness far beyond that of Moses to the use of his name as an agent for the sale of all shams and impostures—anything and everything. Millions of dollars are annually invested in this partnership, and this is the secret of the matter. No wonder that the majority of newspapers are hostile to anti-quackery laws, and to all legislation which restricts advertising. Patriotic and disinterested, aye?

MEDICAL NOTES.—Some exceedingly interesting photographs of small-pox eruption from the third to the fourteenth day, the work of Mr. S. A. Powers, of the Small-Pox Hospital, may be seen at the Medical Library.

—Joseph Pancoast, M. D., Emeritus Professor of Anatomy in the Jefferson Medical College, died at Philadelphia last Tuesday morning, aged seventy-seven.

—The Woman's Medical College of Baltimore has recently been incorporated. The course of lectures will begin October 1, 1882. Seven professors, all of them gentlemen, have been already appointed.

—The Paris Academie des Science has conferred on Professor Brown-Sequard the distinguished honor of the Grand Prix Lecaze. This prize, which is of the value of ten thousand francs (four hundred pounds), is given only in recognition of a lifelong devotion to physiological science, which has resulted in important discoveries. The previous recipients have been Chauveau, Marey, and Dareste.

THE firm of Lindsay & Blakiston, which for the last forty years has had a corporate existence, is dissolved by the retirement of Mr. Lindsay. The business is continued under the firm name of P. Blakiston, Son & Co. May the new firm retain the confidence and esteem which, for nearly half a century, was most cordially given by the medical profession and most thoroughly deserved by Lindsay & Blakiston, whose name was as the name of an old friend to the majority of medical men.

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ORIGINAL CONTRIBUTIONS.

Curability of Consumption.

BY WADE MINOR LOGAN, M. D.

Author of a Treatise on the Pathology and Treatment of Pulmonary Consumption.

CINCINNATI, OHIO.

(Prepared by request, and read before the Society of District Physicians of Cincinnati, Wednesday evening, February 8, 1882, Dr. P. F. Maley, President, in the Chair.)

MR. PRESIDENT AND GENTLEMEN:

I INVITE your attention briefly this evening to the consideration of the Curability of Phthisis Pulmonalis.

The object of a study of this subject at present, is to determine, not definitely to what extent, or in what proportion of cases, but whether at all, the so-called curative or restorative treatment of the disease known as *phthisis pulmonalis* is possible or practicable.

While it is a popular belief among the laity, shared in, and, indeed, inculcated by numerous physicians, that consumption is necessarily an entirely incurable disease, others contend that it is not unfrequently amenable to treatment. It remains, therefore, for us to ascertain which of these two opinions is correct.

As you are aware, the treatment of all diseases is either curative or palliative.

An important question therefore arises, whether unmistakable cases of consumption should be advised to use only the pleasantly flavored palliative medicines, from time to time, to relieve temporarily the abnormal thoracic

and other distressing symptoms, or incur the additional expense, and inconvenience themselves further, by employing persistently, and systematically, a primarily less agreeable, and less convenient treatment, understood to be restorative and rational.

The advocates of restorative or curative treatment in this disease, among whom are some of the most observant and experienced physicians in the world, notably many specialists like Williams and Bennett, of London, as well as others, whose clinical experience and well-known integrity give their views and utterances the weight of authority, claim that in nearly all cases life may be considerably prolonged, while in not a few an entire cure may, in time, be effected by treatment; the writer indorsing, as will presently be seen, most positively the latter view. Upon this point, my very accomplished and well-known friend, and former fellow-townsmen, Prof. Bartholow, now of Philadelphia, says: "But a few years ago, a cure of any case was regarded as hopeless; but within recent times the improvements in our knowledge of the local conditions, and in the means of treatment have led to better results, and cures are now not uncommon."—*Bartholow's Practice of Medicine*, 1880. P. 368.

Under the heading of Prognosis, Dr. A. Flint, Sr., remarks that "The mortality from the disease has undoubtedly diminished within the past ten or fifteen years. This must be obvious to medical observers whose professional experience extends backward a quarter of a century or more. The fact is also shown by the statistics published by the registrar-general of Great Britain, and by the mortuary reports of the large cities in this country. The explanation of the fact is probably to be found in improved views as regards the management of the disease. The diminution which has already taken place in the death-rate from this disease, affords ground for the hope that its formidable character may be still further mitigated."—*Flint's Principles and Practice of Medicine*, 4th ed., 1873. P. 301.

Even considering, as is admitted by many, and clearly shown by Drs. C. J. B. and Chas. T. Williams, of London, from the accumulated records of their extensive practice and researches, as set forth in their masterly work on *Pulmonary Consumption*, under the headings of Duration, Prognosis, Retrospect, etc., that in those of the less rapid

cases of consumption, in which actual and permanent arrest of the disease does not occur, life may be considerably prolonged and rendered agreeable, then restorative treatment can not reasonably be considered as being a failure, or as else than a boon; for as Shakspeare says:

"The weariest and most loathed worldly life,
That age, ache, penury, and imprisonment
Can lay on nature, is a paradise
To what we fear of death."

Hence, when patients with sore lungs, believing they have consumption, present themselves in a physician's consulting room, after he has examined them, and has inquired into their cases, invariably ask: "Do you think you can cure me? Can I get well?" An answer is naturally expected, although, of course, it can be given only approximately. Let us proceed to answer here as well as we can.

Assuming that the physician is reasonably intelligent and skillful, the apothecary and his medicines good and reliable, before we can hope for successful treatment, we must be sure that we have a good patient. And what do we mean by this: First.—The more youthful, the better; although some persons are practically younger at forty years, than others are at thirty, and have consequently greater recuperative power. Therefore, those in whom vulnerability of constitution, either inherited or acquired, is comparatively less pronounced, must be considered as having, in this regard, a great advantage over those who are differently circumstanced.

Second.—The more favorable the hygienic influences to which patients are subjected, the greater their degree of mental contentment or buoyancy of spirits, as well as their pecuniary ability to procure the substantial things needful to their well-being, of course, the better.

Third, and last, but not least—if they wish to be successfully treated, they must have an invincible desire to recover that will make them indefatigable in regularly and systematically taking their medicine, and obeying, to the minutest details, the directions and precepts of their medical adviser.

While it is certainly the duty, and I believe the practice of physicians generally, to study to please, by prescribing their medicines and other treatment as agreeably and conveniently to their patients as possible, it most certainly may be said that those consumptives who do not possess

sufficient self-control, and are not willing to be, for a time, self-sacrificing enough in respect to their tastes* and convenience, to implicitly follow their physician's directions, need entertain no hope whatever of being cured; and the physician should never cease to warn his consumptive patients against carelessness or procrastination in taking their medicine, by impressing them constantly with the inconceivably important fact that "eternal vigilance is the price of safety."

And to encourage them in well doing, we may, from time to time, remind them of the power of habit, and the comparatively short time required for its acquisition. In other words, that by perseverance they will soon get used to taking medicine, as we shortly become accustomed to easily wearing an at first uncomfortably fitting garment, or as disabled vocalists become speedily tolerant of laryngoscopic examinations, or as the extreme annoyance primarily consequent upon the wearing of artificial teeth presently subsides, developing a corresponding degree of inconvenience, when, for any reason, their being worn is temporarily discontinued after having become habituated to their use. "See how use doth breed a habit in a man," says Shakespeare.

Again the same author makes Hamlet remark of the grave-digger, in reference to his lugubrious calling, "Custom hath made it in him a property of easiness."

And again this poet of nature represents the "melancholy Dane" as saying to an indulgent associate in the play:

"Refrain to-night:

And that shall lend a kind of easiness

To the next abstinence: the next more easy:

For use almost can change the stamp of nature,

And either curb the devil, or throw him out

With wondrous potency."

And what is true of abstinence may be said to be equally true of indulgence; the power of habit, in either instance, always asserting itself. In this way I have known

* "Not enjoyment, and not sorrow,
Is our destined end and way,
But to act, that each to-morrow
Find us further than to-day.

"Let us, then, be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labor and to wait."

—Longfellow.

patients, who at first experienced the most profound loathing for medicaments of all kinds, to presently become so habituated to their continued use as to promptly and faithfully follow directions without the slightest complaint, but in a perfectly business-like manner. One very sensible lady of this class in particular, whose gastric and gustatory organs were superlatively hyperesthetic, assured me, after she had been under treatment a few weeks, that taking medicine had at last become of but little more trouble to her than drinking ordinary fluids when thirsty, or putting on her gloves preparatory to going out riding. Here is an interesting illustration of that powerful agent called habit, which we may utilize, by way of "moral suasion," as an important adjuvant to our officinal remedies; not only good, regular, wholesome habits of living, ordinarily, but the exceedingly useful habit of properly taking medicine when required as well. And when, as is contemplated, in presenting the arguments contained in this paper, convincingly, to the notice of the profession, and through it the public mind becomes rightly educated, and disabused of the existing fallacy in regard to the therapeutic value of restorative treatment, so that consumptive invalids will be enabled to understand satisfactorily that well directed medication and proper living affords them a sufficiently reasonable probability of substantial benefit, or even entire recovery, to compensate for the expense and inconvenience incident thereto, it will, I am sure, be quite easy to demonstrate grandly the availability of this latent force, and the usefulness of the medical profession, with its resources, in pulmonary affections, will be thereby very greatly enlarged.

Now as to the results and success of treatment. We have elsewhere suggested that treatment was successful in two classes of cases, viz.: 1st. Those in which life is considerably prolonged, and rendered comfortable without effecting a *complete* arrest of the disease. 2d. Those in which the disease *does* become *completely* arrested, as is conclusively demonstrated by the distressing symptoms gradually disappearing with marked general improvement in all the bodily functions, until the establishment of perfect health, of more or less protracted, all the way to absolutely permanent continuance—in the latter instances the patients many years afterward dying of some entirely different malady, and affording *post mortem* opportunity for observ-

ing the positive evidences and results of cure, of long standing. (See Figs. 1 and 2.) While others, less fortunate, by being subjected, after recovery, to depressing influences of some kind, such as exposure, over-work, improper living, etc., experience a relapse, with all the annoyance of the disease reawakened. It may, I think, be logically considered that a large proportion of the cases suffering from relapse in this way would meet with the same good fortune as those more permanently cured, if they could, and would, but avoid the depressing influences above mentioned.

Under the heading, "Hopeful Prognosis," Dr. Williams says, exclusive of the very acute cases, "Surely the time is come when we can hold out a fairly hopeful future to the consumptive patient. We can tell him that if he is prepared to make certain sacrifices of time, of money and of liberty for some years, to rigidly carry out certain common-sense rules which long experience of the disease inculcates, he may, under favorable circumstances, live on for a long period, even to the ordinary span of life; and, as he lives on, may gain sufficient strength to resume his former occupations and duties."—Williams on Pulmonary Consumption, p. 309.

But there are physicians, medical practitioners at least, who do not believe this. In conversational discussion of this subject at different times, I have frequently known popular practitioners, even those doing a large and lucrative practice (who, perhaps, can not spare time, nor have the scientific inquisitiveness, to correctly inform themselves—being "intuitively" too "*practical*" (?) to have any use for such valuable information as is furnished by the great medical authorities), to declare consumption absolutely and necessarily incurable, and in support of this declaration to cite their own vast but unsuccessful clinical experience, in which their patients had invariably died. And they would even challenge a fellow-disputant to produce from morbid anatomy or elsewhere any positive evidence whatever of consumption having ever been cured,* as though the literature of the subject were entirely barren in that regard.

*Figs. 1 and 2, page 297, illustrate very beautifully the *post mortem* evidences of arrested consumption; the former a stellated scar after recovery, the latter a tubercular cavity cured, its ulcerated surface being lined with scar or cicatricial tissue.

Let us view this matter for a moment, if you please, in the light of leading and trusted authorities. And by way of illustration, the first case of well-pronounced recovery from consumption that I will mention is that of Pinel, the celebrated French pathologist, who lived at the end of the last century and at the beginning of this, as I quote it from Dr. James Henry Bennet's valuable work on Pulmonary Consumption, page 185: "In early life, at the age of twenty-five, he was pronounced consumptive, and spent two winters at Montpellier, then a favorite resort for consumptives, and the summers in the north of France. He got quite well, entered into practice in Paris, acquired great fame in the treatment of insanity, made and lost three fortunes, and died at the age of seventy-five, in harness up to the last. His voice had been permanently modified during the illness of his youth, and he maintained throughout life that he had been consumptive and had got well. As, however, percussion and auscultation were unknown in those days, the diagnosis had been merely a matter of opinion, and his friends always insisted that he had had nothing but bronchitis. On his death-bed he requested two friends—M. Serres and M. Gendrin—to make a *post mortem* examination in order to clear up the question. This was done (1822), and all the traces of past, but cured, phthisical disease enumerated above were found, in a most irrefragable manner, fifty years after the cure. These details I had from my old friend M. Gendrin, who, with M. Serres, examined Pinel according to his wish."

Let us pursue this matter a little further. Regarding the prognosis in cases of phthisis pulmonalis, Dr. Wood says: "It occasionally happens that consumptive symptoms disappear entirely, even in the second stage of the disease, after the formation of a cavity. This event, it is true, is comparatively rare; but some such cases have probably fallen within the notice of almost every practitioner of extensive experience. Even should the disease ultimately return, still the case may be said to have been cured; as the occurrence of a second attack of pneumonia is certainly no proof that the first was not cured. But there have been cases in which no return of the symptoms has taken place during the residue of life, even though considerably protracted. Two instances of this kind have occurred in medical men of this city. One of the patients was affected, when a young man, with all the

symptoms of phthisis, including frequent attacks of hæmoptysis, severe cough, hectic fever, etc., from which he completely recovered, and continued exempt up to the time of his death, which occurred many years afterward of typhoid fever. (See '*N. Am. Med. and Surg. Jour.*,' viii., 277.) The other was my preceptor and friend, the late Dr. Joseph Parrish, who in early life labored for a time under the symptoms of phthisis, and after his death, at an advanced age, was found to have several cicatrices of the upper part of one lung, which were obviously the remains of tuberculous cavities. (See '*Am. Jour. of Med. Sci.*,' xxvi., 256.)"—*Wood's Practice of Medicine*, Sixth Edition, Vol. 2, p. 98.

"At present, so far from phthisis being considered to be uniformly or even generally fatal, it is admitted that treatment can in a great majority of cases prolong life, while in many, the number of which is annually increasing, a complete and permanent cure may be effected. . . . It can no longer, therefore, with truth be considered that phthisis pulmonalis is that *opprobrium medicinæ* it was formerly considered. Nor should certain charitable institutions any longer refuse to admit such cases on the ground of their incurability. . . . I confidently look to the future as affording means for demonstrating the ratio and conditions under which the prognosis of phthisis may be determined. In the mean time, I can only express my conviction that its permanent arrestment and cure are, by judicious treatment and hygienic management, becoming every day more frequent and more widely extended."—Dr. John Hughes Bennett in *Reynold's System of Medicine*, by Dr. Henry Hartshorne, 1879, vol. 2, pp. 130 and 131.

Concerning the reparative and curative process involved when tubercular matter has been deposited in the lungs, in moderate quantity, but has not produced excavation, Sir Thomas Watson, the great English physician, says: "The moister parts of the morbid secretion may be absorbed; and the earthy salts it contains may concrete; and the whole be converted into a shriveled, hard, chalky or mortar-like mass, which sometimes is coughed up, sometimes, in favorable cases, remains for years in the lung an inert and almost harmless body."—*Watson's Lectures on the Principles and Practice of Physic*, by Dr. Henry Harts-

horne, Philadelphia, 1872; last Am., from 5th Eng. ed., vol. 2, p. 219.

The probability of tubercular matter being thus removed or eliminated from tuberculous lungs, by absorp-



FIG. 1.

Cicatrix or scar at the apex of a lung, resulting from the previous arrest of tubercular disease.—See Watson's Practice of Medicine, 1872, volume 2, p. 220.



FIG. 2.

Internal section of the summit of the left lung, showing a large cavity, the result of tubercular consumption, cured and lined with scar or cicatricial tissue.—From Bennett.

The copying of these splendid engravings was very faithfully executed by Mr. Edward McFee, a rising Cincinnati artist.

tion, was very plausibly advocated by the late Prof. L. M. Lawson, in his excellent work on Phthisis Pulmonalis, p. 96.

Upon this point Dr. Flint says: "The entire deposit may be absorbed, or the animal portions may be absorbed, the mineral constituents remaining in the form of obsolete tubercles or calculi, and these may remain quiescent, or they may find their way into the bronchial tubes and be expectorated. Cavities may completely cicatrize. In these modes complete recovery may take place. This, of course, is the most satisfactory termination. And next to this is the persistence of cavities without any fresh products, the cavities giving but little inconvenience for an indefinite period, and even through a long life. According to these different modes in which the course of the disease is favorable, cases may be divided into those in which an arrest takes place without recovery, and those in which the arrest is followed by recovery."—Flint's Practice of Medicine, 4th ed., 1873, p. 301. See also same vol., p. 37.

Referring to the healing of tubercular cavities in the lungs, Dr. Watson says, "When they occur singly, without other tubercles or cavities (which, though a rare thing, does sometimes happen), and when occurring thus singly they have been completely emptied, they may gradually contract, and ultimately become obliterated. This approach of their sides leads to a puckering of the pleura on the surface of the lung; and, on the other hand, a puckering of the surface indicates that beneath it there is probably a shrunken, or an *obsolete* vomica. The central part of the diseased spot is converted into a substance resembling cartilage [Figs. 1 and 2]; and the appearance it presents is called a cicatrix; and really it deserves that name. The process which has gone on is a process of natural recovery; and the recovery would be complete and permanent, if no fresh deposit of tubercular matter took place."—Watson's Practice, same edition and volume cited before, p. 218.

Of the condition of the lungs after consumption has been cured, Dr. Williams says: "The signs of the cure of phthisis might be expected to be the complete disappearance of those of the disease, but it is rare that the disease and its effects are so completely removed as to leave no trace behind. We can record a few cases of incipient dis-

ease, chiefly of inflammatory origin, and of decidedly consumptive character, in which crepitation, dullness and tubular sounds have been entirely removed, and the patients have been restored to complete health. But the commoner degree of what may still be called a cure, is where the general health is recovered, cough, and expectoration, and other symptoms have ceased; yet the physical signs, whilst showing a cessation of all active disease, still indicate traces of its effects on the lungs and their coverings. Thus, a collapse under a clavicle; a flattening of the upper or lateral walls of the chest; slight variations in the sound on percussion, and in the respiratory movements; a weakness or a mere roughness of the in-breath-sound in the former seat of disease; a remnant of tubular sound, especially above a scapula in some of its varieties—whiffing, blowing, long out-breath, broncophonic—may permanently remain, evidences of trifling changes left by former diseases, but not materially interfering with function or structure, and therefore productive of no further disorder than perhaps slight shortness of breath, and disposition to cough on exertion and on changes of temperature.”—Williams on Pulmonary Consumption, London, 1871, pp. 177 and 178.

Having presented these very important observations from a few of the highest authorities in the medical profession, inculcating, as they do, that in the present state of our science most consumptive patients may be materially benefited, and others entirely cured by well-directed medical treatment, I will now proceed to say something about some cases of phthisis pulmonalis which I myself have successfully treated, aided at times, I am pleased to relate, by the wise counsel of my distinguished and very particular friend, Dr. Wm. Carson, of this city. And the first case that I will call attention to is that of Harry B——, æt. 20 years at time of first consultation on July 20, 1870, a varnisher by occupation. He was of medium height, slender, and very much emaciated; and presented the following symptoms: persistent and distressing anorexia, a most harassing cough with muco-purulent expectoration, frequently tinged with blood, and for several weeks had been annoyed with exhausting night sweats which my predecessor in the case could not control. Patient stated that both parents had died of consumption when he was a child.

PHYSICAL CONDITION.

Extensive flattening of anterior thoracic wall below left clavicle, with profound dullness on percussion, bronchial breathing and broncophony. Also moist rales heard in same region. Rude inspiration, prolonged expiration, and dullness on percussion at apex of right lung. Also puerile respiration heard in other parts of the chest.

TREATMENT.

At first, oxide of zinc and ext. of belladonna, in pill, at night, with compound camphor liniment locally, to relieve intra-thoracic irritation, mitigate cough, arrest colliquative sweating, and procure sleep; but which were discontinued in a short time, after the subsidence of the troublesome symptoms for the relief of which they had been prescribed. Also tinct. ferri muriat. in fifteen drop doses, in combination with tonic doses of quinia, and tincture of nux vomica, diluted half an hour before meals, and bismuth and pepsin after meals, to relieve the irritable and enfeebled stomach, increase the appetite, and promote digestion, as well as contribute to the general tone of the organism. Slight improvement was soon manifested, and was continuous; but it was several weeks before the gastric distress was sufficiently subdued to warrant the discontinuance of the bismuth and pepsin powders. Then they were superseded by dilute nitric acid, in thirty to forty drop doses, diluted, after meals, while the tonic of tinct. ferri muriat., nux vomica, and quinia before meals was still employed. After this was persevered with a couple of weeks, the digestive powers having greatly improved, and being sufficiently restored to warrant the procedure, cod-liver oil was prescribed, and tolerated in drachm doses, gradually increased to half a fluid ounce, thirty minutes after meals. This treatment was persevered with, modified from time to time by the occasional alternation of one tonic combination with another, aided, when required, by stimulating applications to the chest, locally, and anodyne expectorants—principally at night—during a period of two years, when medication was finally discontinued, the patient feeling and looking perfectly well. He had, during the last year and a half, resumed his occupation. One year after (1873) the discontinuance of medication, he was, at my request, examined by Dr. Carson, who had examined him in consultation with me

three years previously, finding slight dullness on percussion, with wavy respiration in upper part of left lung. Upon examination the right lung was found to have resumed perfectly its normal condition. Within a few days of the present writing (January 15, 1882), he has been seen on the street looking as robust as could possibly be desired, and stating that since prior to July, 1872, when he ceased medication, cured, he had not experienced a pain, ache, or bodily ill of any description.

So much for the eminently successful treatment of this well-marked, unmistakable, and, at first, seemingly unpromising case. The next one to which I invite your attention is that of Miss Anna K——, æt. at time of first consultation, in July, 1876, fourteen and one-half years, and an operator in a cotton factory, by occupation. Upon my arrival at the patient's residence, I found her profoundly emaciated and too feeble to sit up, or even speak; but her mother informed me that the case was one of several months' duration. That her illness started from exposure to cold, followed by cessation of the catamenia, hæmoptysis, loss of appetite, and the various other phenomena which usually attend phthisical decline of the bodily forces. That her father's sister had died of consumption. That several physicians had, at different times, been consulted in various college dispensaries and elsewhere, in the earlier periods of the case, all of whom pronounced it as being consumption, and incurable. That she was then suffering from a severe diarrhœa, in which the bowels acted every few minutes, and that at times she was distressed with a cough, violent almost to suffocation, and accompanied by a muco-purulent, and occasionally bloody expectoration. Considering the circumstances, of course, no physical examination of the chest was at that time made.

TREATMENT.

My first prescription was half a fluid ounce of camphorated tincture of opium every three and one-half hours, alternated midway between doses with an ounce of brandy, diluted, and four grains of quinia; expressing to the family the opinion that but a few days at most, and perhaps only so many hours remained for the girl to suffer. Very much to my surprise, however, at my visit on the day following, I found her not only alive, but very greatly relieved. Although still too weak to sit up in bed, or to speak above a

whisper, the diarrhoea had stopped and the patient was quite comfortable. I then ordered that the brandy and quinia be continued every four hours, with tonic doses of tincture of nux vomica, but in the absence of continuous anodyne necessity the use of the opiate should be limited to a dose in the evening to insure rest. This treatment was continued three weeks, in conjunction with various bland nutrients, such as rice-water, isinglass jelly, oat meal gruel, sago, beef-essence, panada, tapioca, soft boiled or poached eggs, etc, in moderate quantities, and in continual rotation, by way of variety to maintain their acceptability, midway between each tonic and stimulant potion, followed by three grain doses of Scheffer's pepsine, and five grains of sub nitrate of bismuth; using simultaneously stimulating applications, *pro re nata*, to the chest. By this time the patient had improved so much, that she was able to sit up at short intervals and took her nourishment with great relish.

A physical examination was then made, revealing slight depression below right clavicle, with dullness on percussion, bronchial breathing and broncophony. The same auscultatory sounds were well pronounced posteriorly to right apex. Also coarse inspiration, prolonged expiration, and dullness on percussion at apex of left lung.

Her regimen and treatment were then changed to three regular meals, *per diem*, consulting the taste as to quality, and the appetite as to quantity, each meal being preceded thirty minutes by five grain doses of citrate of iron and quinine, in solution, with five drops of tincture of nux vomica, and a drachm of compound tincture of gentian—interrupted occasionally, and substituted from time to time, by a variety of other tonic combinations—and followed, shortly after eating, with thirty drops of dilute nitric acid in a wine-glassful of water, and a drachm, gradually increased to half a fluid ounce, of cod liver oil in emulsion,* with a pill of oxide of zinc and extract of

*I will not pause here to describe the processes by which are prepared the various emulsions of cod liver oil, which I direct my patients, under different conditions, to use, but will reserve that matter for discussion at another time, under the heading of Cod Liver Oil Emulsions, in a paper which I purpose producing presently, entitled Some Observations Upon the Treatment of Phthisis Pulmonalis. I may state, without boasting excessively, that the apparatus which I devised a few years ago, with which to cheaply and efficiently prepare palatable cod liver oil emulsions, was, upon the score of novelty, awarded a Silver Medal by the Seventh Cincinnati Industrial Exposition, 1879.

belladonna, when required, at night. This treatment was well tolerated, and was followed by such remarkably rapid and uninterrupted improvement, that on the eighty-third day of my observation of the case, in passing her house, I was surprised to find the patient engaged in removing a pile of coal from the street. From that time (October, 1876,) I ordered the treatment reduced to ten drops of muriated tincture of iron, diluted, and three drachms of cod liver oil, thirty minutes after meals, which was continued during the winter, and an entire suit of heavy, all wool, flannel underwear to be worn, and under no circumstances to be omitted until after the permanent return of warm weather. I may remark, by way of parenthesis, that the paramount importance of this latter procedure, to protect the patient from atmospheric changes, can certainly not be overestimated, or too emphatically insisted upon.

In the spring of 1877, the nutritive treatment, consisting of muriated tincture of iron and cod liver oil, which had alone been employed during the winter, was permanently discontinued, the patient seeming and expressing herself as feeling perfectly well, and having pursued her vocation from the November preceding—which she has also been able to do uninterruptedly to the present time, her health continuing to be unexceptionably good.

PRESENT CONDITION.

On October 14, 1881, at my request, the patient was examined by Dr. Wm. Carson, who found slight deficiency of motion, with slight impairment of percussion resonance, and defective vesicular murmur at upper anterior region of thorax on right side. Slight percussion dullness and prolonged expiration at right apex, posteriorly. Lower portion of same lung slightly defective in percussion resonance, with feeble vesicular murmur below angle of scapula. The left lung was, upon examination, found to have resumed perfectly its normal condition.

Thus I have, at the risk of being tedious, sketched as briefly as possible the histories and treatment, with the verified results, of two obviously dangerous and unpromising cases. I have, of course, in a very considerable practice, extending over a dozen years, attended a large number of consumptive patients, whose treatment, in not

a few instances, was followed by equally gratifying results with that of the two cases detailed above. Even as remotely as 1871, I reported, in the book on Consumption which I published that year, an account of twenty-four cases, ten of which recovered, three died, four materially improved, before quitting treatment; while the remaining seven consisted of those pusillanimous creatures who have not character enough to become obedient and painstaking patients, but who always improved whenever, for a while, they could be prevailed upon to take their medicine, are marked "favorable," after having been under observation during varying periods of from two to seven months. My reason for selecting these two in particular is, that they have (although at first seeming almost moribund) not only recovered their health perfectly and still retain it, lived and flourished without relapse—one for more than nine and a half years, and the other five years, since the entire discontinuance of medication—but that in both of them it is my extreme good fortune to be sustained in regard to diagnosis, treatment, and results by Dr. Carson, whose judgment in such cases, I need scarcely tell you, is authority for the medical profession wherever he is known.

Notes on Heredity—Common School Education.

BY T. L. WRIGHT, M. D., BELLEFONTAINE, O.

It has been said, by Dr. Geo. M. Beard, that the American people are peculiarly the subjects of morbid neurotic phenomena. It appears to be a fact that such phenomena assume modified characteristics in this country, which seem strange to observers abroad. We will try and point out at least one source from which these nervous characteristics flow, that, in a great degree, is truly national with us.

One of the greatest boasts of a citizen of the republic is, that he has the facilities and advantages belonging to a rather superior *education*—as that word is commonly understood. This boast is rendered the more imposing from the fact that this education is supposed, by a vast number of people, to supersede any ordinary imperfection of nature or condition, and to raise the defective and in-

competent in mental power, by sheer force of educational levers and screws, to a common level with the highest possible mental plane.

Let us inquire, for a moment, what the plan of education should be, and then observe what it actually is among ourselves. President Joseph Le Conte, in an essay on *The School, the College, and the University*, says, truly, that "the natural order of culture must be the order of natural mental development"—meaning the natural order of the development of the mental faculties. In other words, and as medical men would say, the order of taking up and pursuing studies should be in strict harmony with, and relation to, the progressive development of the human brain. Nothing can be more reasonable and true than this proposition.

But the question now arises, What is the natural order of the development of the mental faculties? On this subject the same authority says, in general, that the order of time is: "1. The perceptive faculties and memory; 2. The imagination and the esthetic faculties; and, 3. The reflective faculties. *Childhood* is the golden period of perception and memory; *youth* is the period of the culmination of imagination; while in early *manhood* the higher faculties of productive thought begin to show themselves." In early life *sense* is the basis of education; while later, sense becomes blunted, and *ideas*—logic, abstractions—occupy the mind.

Taking these propositions as true, it is apparent that *ideals*—the *principles* underlying phenomena—are not proper subjects of attention at an early period of life. Abstractions and pure reason are not proper topics to place before the young and undeveloped faculties, any more than the rosy and joyous subjects of memory and perception are proper for the consideration of the mature faculties, after the jubilant and facile period of youth is gone.

Let us consider the style of study that is required in our common schools. An inspection will show a class of a dozen or more progressing about as follows: Two or three in the class will be observed to be clearly in advance of the rest. These two or three will exhibit preternaturally bright eyes, with a nervous and anxious alertness of manner, and more or less muscular tremulousness of the lips, if not of the entire muscular system.

The others lag behind at unequal intervals; and it is evident that they are mentally unequal to the task before them. The leaders, by hard and unnatural mental effort, manage to make a good record, while the remainder, with their best industry, and the utmost tax upon their powers, fail, and become disheartened and humiliated.

This is the mimic battle of the school-room. Note now the outcome. The heads of the classes in the school are heard of no more when the real life battle is fought; because, in their early youth, their mental energies—their brain energies—are permanently injured by systematic overstrain. The course of study established in school being in accordance with the highest possible capacity of the brightest minds, is too wearing, too exacting, to be healthful.

Let it not be forgotten, that it is not any function of education to *develop* the mental powers; but only to *train* them, and render them, not strong, but effective. On this point Dr. Jewell, of Chicago, remarks (*Journal of Mental and Nervous Diseases*, January, 1881): "It is my opinion that a very great number of cases of nerve disease are produced—such as cerebral congestions, undue nerve irritability, sleeplessness, or at least imperfect sleep troubled by dreams, headache, various forms of neurasthenia, not to speak of graver forms of disorder—by systematically overtaxing children in our public schools."

So much for the practice of *overtaxing*, even when the studies may of themselves be of a kind proper enough, and suited to the condition of mental development. But the truth is, that in the wild and unreasonable ideas entertained by many, respecting the objects and advantages of education, there seems to be really an attempt, through our common schools, to combine all the several offices which should be distributed to the functions of the college, and even, to some extent, the university. That is, there is an effort made during childhood and comparative youth to indoctrinate into minds immature and undeveloped those sciences and principles which pertain to maturity and full mental development.

What is more hopelessly discouraging, more totally *blank* and senseless to a child, than to require of him some analysis in arithmetic, to the accomplishment of which his mental faculties are utterly inadequate, simply because they are as yet not developed up to the capacity

for such work? One may talk and explain with the utmost pains and care; the work will even then be vain, and the lesson incomprehensible. It is, if possible, still worse, when the faculties begin to open for such topics, to subject them to whip and spur, in order to *strengthen* them in that direction. This simply results in strain and overtaxing, just as excessive study, under the most favorable circumstances, results in overstrain, and in the *disasters of an unstable nervous system*.

Now, what is an unstable nervous system? We may say, in general terms, that it is a morbid neurotic constitution, either hereditary or acquired, which stands in the position of a *predisposition* to some one of a great number of nervous diseases; a predisposition which only requires some exciting cause to precipitate calamitous nervous phenomena. Such an unstable nervous system, upon the excitement of alcohol, may run into dipsomania, with all the horrors of alcoholism. Upon certain impressions in the female economy, it may precipitate hysteria; or, it may result in somnambulism, or epilepsy, or insanity, or other active nerve maladies.

Dr. Whittaker (*Lancet and Clinic*, February 25, 1882) very properly points out the effects of predisposition. In speaking of the properties of alcohol in the production of general paralysis of the insane, he says: "It is the rule, that where we have a long continued use of alcohol, we have this hyperplasia; yet there are cases in which it does not occur. We frequently see persons addicted to its use for years, in whom it has produced no apparent harmful effect; *so there must be a predisposing* as well as an exciting cause; and this predisposition often comes by heredity." It is in the establishment of just such a predisposition as that alluded to, that, it is greatly to be feared, our common schools are assisting. What boots it, if we turn out a young man with a fair education, if he is burdened also with a constitutional instability of nerve, which makes him a drunkard?

Dr. Beard has presented the theory that a state of impaired consciousness called *trance*—a state allied to somnambulism and the mesmeric sleep—is the result of a *concentration* of certain parts of the mind, with a corresponding quiescence or abstraction of other faculties. In respect to our present subject, it is a matter of no moment, whether we consider the *faculties* of the mind as acting

in an α -symmetrical and unbalanced manner, or whether we consider the brain, *as a whole*, as being rendered, with respect to the body at large, out of balance—by reason of hard and injudicious study; in either case, the establishment of a morbid neurotic predisposition is possible, and, indeed, most probable.

That there is too often an unnatural and morbid concentration of isolated or partial mental faculties in working the school problems, and that this concentration is liable to induce a predisposition to enter into a state of semi-trance, is a reasonable conclusion from the facts that bear on the question. This is a subject well worth attention; and the lines and characters of school-room study, should be so carefully drawn and established, that the pleasures and advantages of education in the common schools may result in good, without any mixture of harm, mental or physical.

Are We Slaves or Freemen?

BY E. A. COBLEIGH, M. D.

IN the December number of this journal, for 1881, I took occasion to canvass with considerable latitude, the subject of "Medical Practice as a Business, or a Charity." In the comments of other medical periodicals, and the numerous letters on the subject received by me from various States, I see that the time and profession are ripe for revolution in many places, and that no insignificant number of practitioners dare to openly avow that they are in our noble (!) profession for the pecuniary motives which it has almost been heresy, heretofore, to admit. I rejoice at these signs of restlessness and discontent under the present order of things, and I hope for an uprising which shall do more than merely complain, which shall boldly demand a change of relation, both in theory and practice, between profession and public.

Though I said much, in a crude way, on the subject in my former communication, I had neither time nor space to go over all the ground, and so I take the present opportunity for considering some other phases of the question. Premising, therefore, that my present readers have already perused the previous article, I shall make this of a supplementary nature, without preface or explanation.

To adequately appreciate this matter, one must bear in mind the treatment accorded to us by the public. This, all physicians of experience can do from their own lives and observation; yet it may be well, for the sake of our argument, to briefly pass in review some of the grounds for complaint, and then contrast these with the services expected of us as a class. The history of the past centuries, from the infancy of medicine down to our own day, may be passed as familiar to all, though gigantic obstacles, resulting from public prejudice, were met time and again, both individually and collectively, by our professional forefathers, ere great public benefactions were successfully forced upon the people, solely for the people's good. Notable of these occurrences, were Harvey's announcement of blood circulation, which cost him heavily in popularity and practice; and Jenner's theory of vaccinia which he had to fight into successful notice and adoption.

But it is our own day—the closing portion of this progressive nineteenth century—with which we have to do now, and to the humdrum of every-day personal experiences. What do we find here? Every medical practitioner is expected by the public to have a thorough knowledge of anatomy and physiology, as the indispensable foundation for rational practice. Yet many of the states not only do not legalize dissection, but, by heavy penalties, seem to have done their utmost toward preventing the student from obtaining thereby that very knowledge which is the foundation of his future medical usefulness. In other cases, where dissection is legalized, supplementary laws have been passed which practically nullify it by affording the tender-hearted philanthropist so many pretexts for claiming all of the material, that little or none can be utilized under the law. Score this, then, as one of the obligations due from us to the laity—one of the debts so eternally paraded before us as due from a noble profession to a suffering people. 'Tis the old story of bricks without straw. Why! it has only been a short time ago that some of our journals reported the passage of a law regulating the practice of medicine in a certain State, wherein it was required of every practitioner that he should have taken two full courses of dissection in a regularly chartered school, and then that same legislature turned round and refused to repeal an anti-dissection statute already in the code. Such is the consistency manifested toward us as a

profession. Only last year, in Georgia, after a considerable struggle in the legislature, a bill permitting dissection, but which had been amended until its restrictions could have afforded only a very inadequate supply of material for the schools, was passed. It allowed the utilizing of paupers dying in public institutions, who were to be buried at public expense, provided they were not claimed by friends; and if so claimed, even though the county should have to bear the cost of interment, the corpse had to be delivered instant. But in steps a faint-hearted governor (whose family physician, however, would of course be required to be proficient in anatomy) and circumvents this slight concession by his veto. So, now, the profession must procure cadavers from other States, at great expense, or face the dangers of a penitentiary by body-snatching. On a par with these measures are the efforts which are making, in many places, to wholly suppress vivisection, from which much of our knowledge is obtained.

In nearly every measure of public health—and all such measures are intended to lessen the income of the practitioner by prevention of disease—the profession is the first, most unselfish and heartiest advocate of sanitation, solely for the people's good; and yet we are usually met by bitter opposition from the same populace whose benefit is sought. This is particularly true, where the proposed measures in the least interfere with local business or social interest, as in quarantine, forced vaccination, etc. Again, in the country or towns, it is by no means an uncommon practice for the farmer, having illness develop in his family, of a not urgent character, to plough or do other field work all day long, so as to lose no time of his hands or his stock, then saddle up at dark and send off after the doctor with a peremptory summons to the patient's bedside. It has been my fortune on more than one occasion, to evolve a pyrotechnic display of profanity on my flatly refusing to be victimized by this trick. Yet a refusal causes enmity and slander, for is not the doctor public property, the people's slave, bound by a sense of both honor and duty to heed at all times the cry of distress, rush to the relief of pain in unquestioning obedience, and twist his own convenience, or his family's comfort, to the people's whim(!). Sometimes, instead of postponing the summons merely until dark, it is put off a

day or more, so as to utilize the horses until the end of the week, and then on the Sabbath the messenger posts off after the physician. For has not the command gone forth, "Six days shalt thou labor, and on the seventh, rest"? So on the seventh, the pious farmer takes his enforced rest. But this command was certainly never intended for the medical man, not in the least (?).

A concert, the drama, a social gathering, or even the sanctuary, may tempt one of us to dare hope for a moment's respite from the serfdom of our calling; but a breathless runner comes dashing along, and wants you to see Miss Smith right away. You know her to be hysterical, subject to fits of hypochondria, or the periodical victim of some other trivial ailment, not in the least alarming. You have attended her in a score of previous attacks, and given her some placebo with entire relief; you offer a prescription or some powders to the messenger, and will come in the morning in person. "No, she is bad off," you are told, and you must go right away. The entertainment is sacrificed, you bend to the yoke, and serenely (for physicians must smile under all circumstances, as a token of inherent amiability, peculiar to the business) prescribe at the bedside. In a year you are paid; or, possibly, are requested, in a piteous strain, to have regard for a lone woman's poverty, and you donate the fee, or accept half price; or, as I have known, your whimsical patient has recovered ere your arrival, and, needing nothing, protests your bill, because you "gave her no medicine."

A young physician, who possesses undoubted ability, and is building up a fair practice, comes home after a day's ride through mud, or snow, or rain, sups, and retires to his sanctum for a few hours of much-needed rest and study. Scarcely is his meditation begun ere a courier comes after him, to visit some notorious dead-beat a half dozen miles out of town. Shall he refuse to go on the plea of weariness, or the need of time for study over some perplexing case under treatment, or even on the ground that he knows there is to be no remuneration for his lonely night ride, his exercise of judgment, his medicine, and his loss of time? He dare not. In the present condition of popular sentiment, it would—or, at least, he believes, from all his previous instruction, that it would—be positively ruinous. Dare he boldly declare his opinion that he can utilize more profitably at home the time neces-

sary to make the trip, rather than by obeying the summons with a certainty of receiving no pay therefor? He goes, and in return receives neither reward nor gratitude of patient or public. But if he fails to go, there is an astonishing promptness in the holocaust of condemnation, heaped by neighbors and friends of this patient on his devoted head, execrating that contumacious "young medical upstart," who would not respond, in unquestioning meekness, to the cry for relief from pain.

We see the gratitude of an admiring public beautifully exemplified in the designations lavished upon us at different periods of our career. At the start we are sympathetically classed as "mere inexperienced students, just out of college." A little later the designation changes to "a *young* doctor," with galling emphasis sarcastically laid on the second word, even where the empty compliment is paid of preceding it with a qualifying "very good." Ten or fifteen years of active practice does not suffice to remove the stigma of that contemptuous word *young*; and then, when this is accomplished, there is a sudden tumbling on the other side of the fence, and the embryo all at once develops into a full-fledged "old fogey." This is another instance of how the world loves us, a sample of the immensity of compassion, due from us to the world, which we are called upon to pay over and over again by abundance of labors for the relief of suffering mankind.

Let me here mention a few instances occurring to myself, or falling under my own observation, of the enslavement attempted toward us, as a profession, by the people whom we serve, until they regard us as their property. A young man in Ohio had accidentally shot himself in the leg. Dr. S—— was summoned to visit him, and prepared to probe for the ball. With an impatient oath the sufferer declared that he would not submit to any such proceedings, when Dr. S—— firmly insisted on so doing. A few hot words ensued, the doctor threatened that unless he kept quiet long enough to locate and extract the missile, he should chloroform him, and cut it out anyway. This had the desired effect, extraction was speedily accomplished, and Dr. S——, holding up the ball to his view, asked: "What would you have done, sir, if I had left that bullet in there?" "Sued you for malpractice, d—n you," was the sententious reply. And this, in a nutshell, is a fair sample of the attitude too often occupied

by us as a class. We are cajoled and fed on "gush," when all is fair sailing, or our services wanted; we are anathematized when we sue for pay, when we ask public recognition or legislation; and we are forced into court for malpractice on the most frivolous pretexts by a class of those who most frequently demand our services, pay us the least therefor, and usually have neither reputation nor means to lose by litigation. Twice has it fallen to my lot to witness a display of affection toward physicians in the arena of politics. In both cases the victims were widely popular, overworked, and sought elevation to the councils of State for the purpose of a change of scene, surroundings and avocation, thinking it would prove restful to them, and beneficial to their constituents. Both were members of the locally dominant political party, though in different States, and holding different views personally. Both were overwhelmingly defeated—slaughtered in the houses of their friends (!)—and from the same openly avowed cause. Their patrons voted largely against them, because they did not want to be deprived of their professional services during their anticipated absence at the State capital. On one occasion, an ignorant man, who had already become my debtor, called me out late at night with the request to visit a case of illness in his family, out of town. I refused on the ground of the non-payment of his indebtedness, which had been by positive refusal; and as he was execution-proof under our exemption laws, his name had merely been transferred from my ledger to a dead-beat list which I keep carefully (and which, I will observe, exhibits wonderful vitality of growth from year to year). He plead piteously, but the case was not of an urgent nature, and I had resolved to teach him a wholesome lesson, then and there. He urged that he had called on all my colleagues in town, and each had refused in turn. I remained firm; he lost his temper, and finally capped the climax by threatening me with prosecution. My wrath may be imagined, but this is no isolated case. Hints of a like nature have been frequently given me, and there is a widespread notion among the lower classes (and even extending in some cases to those of average intelligence) that there are laws obligating a doctor to answer any call, at any time. Yet this is only an error of judgment. It is merely magnifying popular sentiment into legal enactment, as many would wish it to be. In another instance, a neighboring

country practitioner, doing a large business, was called to attend a gentleman of means during his last illness. The patient was very sick, and continued so for two weeks. By special request of the family and friends, and only after urgent solicitation, the doctor consented to stay constantly by the bedside, and he did so for days, abandoning his regular practice, and assuming the double role of physician and nurse. After the death of his patient, he presented a bill amounting to about \$150, all told. For the attention at bedside he had charged \$10 per twenty-four hours, less, by considerable, than his regular practice was netting him at that particular time. The services involved catheterization three or four times a day. His bill was contested by the administrator and family as exorbitant, ended in a suit, costing him heavily, and was at last won by him after much delay and trouble. I once heard of a man who studied medicine, attempted to practice, and finally gave it up to avoid starvation. By the aid of friends he was now educated for the ministry, and entered that. But again his funds evaporated before he was able to obtain a decent support, and he gave up in despair. A compassionate attorney, recognizing the possession of talent by this unfortunate victim of adverse circumstances, took him into his employ, and he at length entered the bar, where he won enviable repute and fortune. Toward the close of his life, on being asked by a friend how such strange happenings came about, he replied: "Men care nothing for their bodies or their souls, but will spend their all in the protection of property and purse."

Now, I do not mention the foregoing merely in a spirit of fault-finding, but as a few of the countless instances every day occurring, which show the results of our self-laudatory course—claiming everywhere, and at all times, the spirit of charity, patience, long-suffering, *et cetera, ad infinitum*, holding our profession up in ideality, above the plane of practical, matter-of-fact, business-like life. We are regarded almost universally as public *servants*, bound by the very act of entering the professional arena, to bear public abuse, shoulder public burdens, bow meekly to the will of prince or pauper, pay or no pay, enduring all, as a matter of course, with complacency, humility and lamb-like submission. No hesitation is expected; none would, in many cases, be tolerated. We have, as a profession, preached our philanthropic doctrines to ourselves and the

people, taught them that we consider ourselves charged with a high and holy mission, under obligations to render succor to the suffering and relief to those in pain, regardless of the why, the wherefore, or the hereafter. No matter how debased the applicant at our doors, no matter how much vice and debauchery are causative of the ills endured, no matter if the community would be better off by the demise of the sufferer, we must go, do our best, and "no questions asked." If there should happen, miraculously, to be a fee forthcoming, it should be taken with thanksgiving (but humility), with doffed hat and bended knee, as the lazzaroni accept a pittance dropped into their greasy palms. On the other hand, no hesitancy must be manifested in yielding to the behest of such an one, either on the ground of doubtful compensation, personal comfort, fatigue, or even illness—unless it be transparently serious—nor should suit be instituted for a fee if the party is a moneyed dead beat, or a bill be presented to the county officials for reimbursements for medicines furnished, or valuable time thus consumed. No, the individual doctor is better able to give his all—his medical skill—in these cases, than the community is to divide the burden among the whole mass of tax payers. Only a few months ago I was cognizant of a case in point. A professional acquaintance in my State was summoned to a case of intra-capsular fracture of the femur, eight miles in the country. The patient was a worthy old woman, 80 years old, living with an aged and decrepit husband, and three elderly maiden daughters. By needlework, gardening, and other light labor, these three women managed to maintain this household in abject, but virtuous poverty. The doctor furnished his own apparatus and medicines, and visited the old lady daily for many weeks, she being attacked with fever during her confinement to bed. At the end of his service the medical attendant presented a bill to the county court for \$25, this being slightly less than his actual cash outlay in the case, not to mention the daily trips, his labor, time, anxiety and neglect of more profitable patients, all of which latter he generously proposed to donate. As might have been expected, the court promptly disallowed the claim, not on the ground of it being a dangerous precedent to pay, but "because it was a part of the doctor's legitimate business to give his services to the poor." Instead of distributing this burden equally

among all of the tax payers, as other burdens of charity are frequently distributed, the public stands before the physician in the attitude of a highway robber, sternly crying "stand and deliver"—deliver your time, your energies, your comfort, your just dues, your rich experience, your stores of mental wealth derived from an expensive library and hours of hard study—deliver them all in meekness, without hope of adequate compensation except as the Deity may see fit to reward you in the life-everlasting. Dare but manifest one sign of rebellion and we bury you in a cataclysm of contumely and ignominy."

Missionaries are employed and paid to preach to the scum of our country; the pauper dies, and is buried at public expense; the criminal comes before our judicial bars in indigent circumstances, but with able counsel assigned for his defense, and generally paid by the State through taxation of the thrifty, temperate, and virtuous of the community; his spiritual welfare is looked after, his liberty guarded, and his corpse laid to rest for a moneyed consideration. But what of his physical ills? Why, outside of our cities and a few favored sections of country, he is simply turned over to the charity of a whole-souled profession, to look after at its own expense. We must soothe the delirium of beastly intoxication deliberately courted by the victim, time and again, saving him only to repeat the same folly. We must enter the dens of prostitution and thievery to stitch up the wounds received in a beastly brawl. We must heal the rot of a syphilis contracted by long-continued vice. We must expose ourselves to personal affront, to real danger in the company of desperadoes and cut-throats, and brave the risk of infection during epidemics. All this for the public good, out of devotion to our calling and in discharge of the obligation of charity under which we seem to be professionally born debtor to the world. In time of public calamity by great fires, by hurricane, by flood, money is freely donated to buy food, provide shelter, transportation, etc., for the victims, and the disburser thereof is usually paid a handsome percentage; the merchant is paid for his supplies, the steamboat, the drayman, the railroad, the mechanic, the undertaker, are recompensed for services. But the doctor—generally he is required to donate his labor, and does so.

Now, is this state of public sentiment healthy or just?

No person of sane mind, unbiased judgment and common sense, will hold the affirmative after candid study of the question. Even the much abused, but high-minded doctor, must acquiesce in negation of the query, if he will but climb down from the pedestal on which his training, his theorizing, his false philanthropy, and popular prejudice have elevated him. Is it purely ideal, or is it practical and business-like? I hold that it is absurdly sentimental—this, and no more. Few, if any, other callings on earth are linked to such ridiculous notions, or conducted on such “utterly utter” principles.

As I stated in my previous article, experience has led me to the heretical belief that doctors are just like other men by nature—of like impulses, ambitions, tastes, necessities—and they ought to carry out the similarity in practice instead of setting themselves, or being set, counter to sound common sense, reasonable financiering, and the true rules of business in medicine or trade.

It is not all of our life-work to visit the sick. We must study, as well as labor, both in justice to ourselves and our patrons. Time is required for this, and we fail of our duty if we do not take time, even if to do so we curtail part of the going to and fro with pills, powders and prescription. None of us know it all, or ever will. And it is not alone for the few moments actually spent in the trip to our patient, in feeling his pulse, hastily reasoning out the case, and prescribing, that we charge. The fee includes—or ought to—compensation for the hours of reading and meditation spent in our sanctums. This should be taught to the people instead of preaching the old doctrine, that fees are made higher than the services are really worth, in order for those who can pay to bear the burden of those who can not. If this be so, better levy a tax to gather in that extra dollar of our moneyed patron, and pay it out openly to a district physician for attending the paupers it is aimed to benefit. Let the laity understand that we only charge the actual market price of our services, which we *sell* for cash to appreciative buyers, and to no others. And if time for study is necessary, cut off the dead-beats, the non-remunerative class of constituents, and give the others better services for their money. This is legitimate in other lines of business, and is expected. Why not in ours? Why shall we not bend our energies in the most profitable channel, just as

the merchant, the manufacturer, the day laborer, does? No logical reason can be given against it, nothing but empty tradition and dreamy impracticabilities. Work for the pay, and collect promptly from the recipient of our services. Collect from the individual where he is able to foot the bill, and teach the populace that taxation should pay for the natural wards of the State, the poor and degraded. Let medical counsel be assigned to the sick pauper, with compensation, just as legal counsel is assigned to the criminal pauper at public expense.

There is yet another phase of this matter deserving of serious attention. Doctors are as much social beings as the rest of mankind, and sociability is half of life. Draw a man entirely away from social intercourse and pleasure, and he fossilizes, even though he mingles with the world in a business way. So with us. Why ought we to forego everything of this kind for the good of an unremunerative class of patrons, merely because the world unreasonably demands it? Let the edict go forth that we intend rather to remain in the social circle, enjoying a feast of reason and flow of soul, than ride six or seven miles to relieve Joe Brown gratuitously of neuralgia, the result of exposure during last night's debauch, or Tom Williams of colic from a watermelon gorge.

In this connection, too, come up our relations to the domestic establishment. Have we no responsibilities as husbands and fathers, like other men? Are our children to have none of our care? We owe it to them to be part of the time at home, to give them the benefit of our precept and example. Few busy practitioners, yielding to all of the demands upon them, take much time for looking after their own households. This is not right. Our posterity have as great, or greater, claims on us than the constituency which we serve, and no one except a physician is expected to forego such claims on all occasions, and for the most frivolous reasons in many cases. In other pursuits it is common for men to serve the public during business hours, for sufficient compensation to support the family decently, or in comfort, and then retire to the home circle, and devote some hours of leisure to that. But we are not supposed to have any hours of leisure, nor to care for that home circle further than to sometimes give it passing thought, to dine there, perhaps, and occasionally sleep beneath its roof.

What I contend for is to be allowed the boon of being natural, so regarded and recognized, no higher in tastes, sentiment or duties than the devotees of other callings in life, no lower in considerations of comfort, profit or obligation. It is our province to labor, to labor hard. It should be the expectation of the public that we have reasonable rest, unsubjected to the enforced demands and whims of profitless seekers after our services, often of a frivolous character. And we ought to be, by common consent, permitted to make our labor profitable in direct ratio with its amount and continuousness, just as tradesmen do theirs, giving something for something, not something for nothing. We should be freemen, not serfs, educating public opinion above the thralldom where it now attempts to hold us, until the same business principles are tolerated in us, as those which obtain in other fields of industry and action. If the physician renders his services, let his bill be expected, presented, collected, just as the plumber, the artisan, the plasterer, the merchant, is treated. If he chooses to contract in advance, to demand a retainer, or full fee before service in doubtful cases, let it be legitimate, as it is with the attorney, or contractor, and not surprising if he refuses to give credit where none is deserved and none would be expected from any other quarter. Let his fee be fair, without danger of the charge of exorbitance, and no one call a doctor's bill of \$25 or \$50 extortionate where a lawyer's fee for \$100 for a less amount of labor, and far less responsibility, would be considered very reasonable. The charge should be understood to be not for medicine furnished, but for advice; not for an hour's time, but for hours of study, for books, for periodicals, for instruments, all of which are required for the patient's good and not merely for the doctor's amusement, just as the profit is paid on a dealer's goods not for the actual first cost but also for clerk hire, lights, fuel, and other running expenses. And when a bill is made legitimately, and the employer fails indefinitely, or refuses to settle, let that bill be collected by law without exciting comments of wonder that the doctor dares to sue, or bringing down on his head the censures of a community. Nearly every section of country is cursed by doctors holding to the old notion that they must not force collections, as it is contrary to public custom and expectation. These are dead weights to the profession, and often retard or

prevent more enterprising and thrifty practitioners from obtaining their just dues. Since my first article appeared, this fact has been prominently mentioned by several who have written me on the subject. One of them writes that his city is full of rich men's medical sons who do not absolutely need the professional income, and will not collect lest they lose popularity. Well, their course would prove no incubus to their confreres if it was not for the popular knowledge of our custom of indulgence, wherefore the people expect no crowding for pay, and would naturally resent so unusual a proceeding. They attribute this carelessness to the inherent nobility of our calling, which is too high to dabble in things pecuniary, being wholly satisfied by the act of well doing. But, as referred to in my former communication, this lack of business principles is purely selfish and sordid after all.

The ideality of our notions is forcibly shown in the arbitrary restriction laid by usage on medical inventors. It is heresy to patent an instrument or appliance, no matter how needy the inventor, or how many hours of weary study, or costly experiment have been devoted to its perfection. This is bosh. Is the medical genius any less worthy of protection and reward than the coal heaver who stumbles on the idea of an improved labor-saving hod? Is he any less worthy than the medical author who ornaments his name with similar hieroglyphics and takes out a copyright on his book? Nonsense! Unless the patent laws are all wrong, and Howe, Morse, and other inventors are public plunderers, the thinking doctor owes no more to humanity, and deserves no less return for the creation of his brain, than those of less spirituality (?) than he. I am glad some in our ranks have been intrepid enough to assert their human nature and cover their inventions with the protection of a patent. It is justice. It is, and means business, pure and simple. And I do most sincerely hope that these instances are but the beginning of a widespread assuming and acknowledgment of our real, but generally concealed, human nature, with no shadow of shame mantling the cheek, and a sense of pride at the repudiation of hypocrisy so long worn. It does seem to me that the hour is propitious for a change, and that we can, and should, throw aside the mask. Let us freely do our full share of work, insist on our right to decline serving where service is not rewarded fairly and

promptly, demand and take a reasonable share of time from the dull routine of daily visits for rest, social recreation, and domestic culture, and fear not to openly avow the reasons for our declining to carry an unending cycle of care.

I have lived and practiced long enough to know that, while prompt collection will at first excite criticism and enmity, the novelty soon wears off, people learn that the doctor means no foolishness about his pay, and he gets it. His practice may temporarily dwindle, but soon resumes its normal proportions, and is then firmly established on a profitable basis. I have tried it. I have worn the name of being the highest priced physician in town, not because my fees were a whit above those of my confreres, but because they either did not make settlements at all, or they rendered bills not itemized, and the people really did not know what their charges for different services were. But, during this time, I never lacked for business or funds; and it is my determination to follow the course of systematic settlement to the end. No business shall chain me to its ranks in which I can not face my patrons squarely, and claim my just dues. I should feel ashamed to do otherwise, and would at once seek employment in some more honorable channel. I propose neither to practice for mere fun, nor empty glory (and "find myself"), but for the cold, sordid, base and worldly lucre. And for the progressionists in our ranks to adopt this policy, I know of no better plan than as follows: Let the doctor have his statements of accounts printed in due form. On the back have his fee bill plainly set forth, for none should be ashamed of a reasonable scale of prices. Give the fees *in extenso*, including the terms for every class of service in his line. Add a foot note that these are his figures, that he intends to follow them, to insist on prompt settlement on that basis, and that if his services are not desired at the figures specified, other counsel should be sought thereafter. Then stick to the fee bill and the policy thereon set forth. It will give due notice of his intentions, it will put an actual cash value on the services he has to sell, and will avoid an endless amount of bickerings and complaint about settlement. Such a device, in brief, would not be very far out of place on a physician's business card; though, of course, I contemplate an uniform system of prices in a community, and no attempt at cutting on fees.

Kind reader, let us shake off the shackles which fetter us—the thralldom of mythological precedent. Let us get down to business in a business way, in this busy country and intensely practical age. Let us agitate for, and set in motion, the wheels of the chariot of reform. Get us down off our high horses of silly sentimentalism, and plod along in a modest, unassuming way, with the common herd of life's pedestrians. Abjure empty pride of name, and assert only the dignity of our calling to a degree necessary for self-protection. And now, your pardon for my verbosity. I had not intended such length; and yet much more might be said on the subject, and probably much of what I have mentioned herein could have been better said by some other writer. I leave the subject in its crudity, for your reflection, for your action, and, I hope, for the further discussion of abler pens than mine.

SELECTIONS.

New York County Medical Society.

Regular Meeting February 27, 1882.

THE paper of the evening, entitled "The Permanent Removal of Superfluous Hair," was read by its author, George H. Fox, M. D.

The growth of hair upon the female face, of which the paper principally treated, was of frequent occurrence. There were hundreds of women who might, if they would, have a long beard; and the number of those who had some abnormal growth of hair upon the face was beyond computation. This abnormal growth of hair was not always a trifling matter, although usually treated as such by the physician when consulted for its removal. It was often a great annoyance, affecting the patient's disposition and prospects in life, thus indirectly ruining her health, perhaps inducing melancholia. His method of operating for the removal of superfluous hairs was by electrolysis. The method was simple, and could be employed by any physician, although dexterity could be acquired only by experience. To the negative cord of an ordinary galvanic battery a fine needle was attached for introduction into the hair-follicle. An ordinary fine cambric needle, which

had been recommended, was too stiff, and answered the purpose not so well as the fine hair-like flexible steel guide which he used. The coarser and stiffer needle was more liable to produce inflammatory reaction and permanent traces after the operation. A high reclining chair, a good light, and a steady hand on the part of the operator were important. At present it was his advice not to remove the hair until after it was loosened by electrolysis. The number of hairs removed at a sitting should be only about thirty or fifty, although he had removed more than two hundred. If the operation were very skillfully performed, the little punctate marks which had sometimes been left, and could be seen on close observation, would be avoided. At first the patient usually was a little nervous and sensitive, but soon became accustomed to it, and did not complain of pain. The author read the history of a number of cases in which he removed from fifty to over five thousand hairs from the faces of different women—in some with the results of permanent removal, in others nearly so, the treatment not yet having been completed. When a second crop of fine soft hair came out at the seat of the original, it was removed in a similar manner, with permanent results.

It was a question as to how electricity destroyed the growth of the hair—whether by thermic or by electrochemical action. Dr. Heitzmann objected to the term electrolysis, claiming that the heat generated in the needle had the effect to destroy the tendency to growth of the hair. Dr. Fox did not think the amount of heat generated in the needle was sufficient to have this effect, and that the employment of the term electrolysis, because of the meaning it conveyed, was proper.

As to the causes of excessive growth of the hair, he was unable to determine. Some in whom it occurred were debilitated, others not; some nervous, others not; some dark complexioned, others light; some young, others older; some married and mothers, others single. The idea that a beard in the female was associated with a masculine character was not founded on fact, for some of his patients were most feminine in disposition. That it was dependent upon the condition of the reproductive organs was, in his opinion, doubtful. The relation had not been proven, only in exceptional instances. Its relation to derangement of the nervous system had been

studied, but not sufficiently. Excessive growth of the hair, whether in the male or female, was an aberration of nutrition, and not a sign of excessive vitality. The Samsons of the present day were usually clean-limbed and of moderate hair-development.

DISCUSSION.

Dr. Heitzmann referred to the introduction of depilation by electricity in this country, and agreed with Dr. Fox that to American dermatologists honor was due for material progress in this direction. Since Dr. Fox had shown him the details of the method, he had employed it a great deal, and with the most gratifying results. He had seen scars produced in but one instance, and then the disfigurement was observable only on close inspection. As Dr. Fox had stated, he believed in the thermic effects of the needle. As to what part any other influence might play, he could not tell.

Dr. George M. Beard thought that the tendency to growth of the hair was destroyed chiefly by the chemical action from electricity, or by electrolysis, as was the case in the removal of tumors, although the slight amount of heat unavoidably generated might have some influence.

Dr. Morrill could not speak from personal experience, but he could testify to the most brilliant and satisfactory results from the method obtained in the hands of Dr. Fox and others; and he believed the operation was destined to become a permanent one.

Dr. Jacobi.—In regard to pulling out the hair, perhaps the plan I have followed in a few instances is one that may prove just as successful, if not a little more so. I do not pull the hair out after the operation, but leave it there; and I have always found, on seeing the patient the next day, if the operation was successful, that the hair was gone. I have done so on purpose, in order to be able to apply the current again when the hair was not removed. When the effect is insufficient, it may be made permanent the next day. With regard to the hyperæmic condition at the insertion of the point, I have not seen that. As a rule, I find immediate anæmia. It is true that reaction sets in afterward, and I then find some small local swellings.

Dr. W. G. Wylie, as bearing upon the possible relation between the presence of hair upon the face of the female

and the abnormal development of the genitals, said he had noticed a scrotal-like development of the labia in a few cases of bearded women.

It was further stated that successful results had been obtained in cases of scattering hairs by inserting a fine-pointed instrument dipped in some caustic—as the chloride of zinc—into the cavity made after extracting the hair.

New York Academy of Medicine.

Stated Meeting, March 2, 1882.

ATTENTION was directed to the dangers and the benefits following the use of

VAGINAL DOUCHES

of hot water. To prevent entrance of water into the uterus, the central aperture in the nozzle of the syringe should be plugged, and further safety was secured by bending the nozzle and plugging the holes on the convex surface. Dr. Castle endorsed all that Dr. Emmet had claimed for the efficacy of this measure in the treatment of pelvic diseases. He doubted the special efficacy of medicated vaginal injections, but believed that the benefit to be derived from the use of the hot water could be increased by the addition of common salt. His method of using the vaginal douche was to have the patient resort to it while taking a hip bath.

The discussion was opened by Dr. H. T. Hanks, who regarded the points referred to by the author of the paper as of practical importance, and he had been especially interested in what had been said concerning the troublesome class of cases seen in connection with the occurrence of the menopause. He also thought that many could bear testimony to the truth of the statement made by Dr. Castle, concerning flatulence as one of the causes of uterine displacement, particularly prolapsus. At least, prolapsus was very commonly complicated with constipation, flatulence and indigestion, and the former was very much aggravated by the latter.

With reference to retroversion, with fixation and the occurrence of hemorrhage as a symptom, he thought it might be true during the first three months; but, when the condition became chronic, hemorrhage from the bowel

did not occur; it was present only during the inflammatory stage of the retroversion, with cellulitis.

With regard to anteversion pessaries, he had not yet found one which acted satisfactorily. He had not yet found Gehrung's instrument in the position in which it was introduced, and he had had occasion to remove more than twenty of them. He could say the same of Dr. Thomas' latest anteversion instrument, and he had removed three within the last week. The instrument kept the uterus up, but Dr. Hanks thought that it did not do it in the best way. He had found the short anteversion pessaries, which simply passed up in front of the uterus, of little use, and, in the vast majority of cases, the so-called short anteversion pessaries did much harm when left undisturbed for two weeks. From a long experience at the Demilt Dispensary, and a somewhat shorter one at the Woman's Hospital, as well as from his private practice, he was *certain* that he could treat successfully all cases of anteversion without pessaries, except when it was accompanied by prolapsus in the first degree. When that condition existed, he had been well pleased with the use of Thomas' *hinge saddle pessary*, and believed that others would find it effectual. The pessary to which he referred was an Albert H. Smith pessary, with a second piece for the cervix to rest upon, hinged at its wide extremity. This instrument raises the uterus from the floor of the vagina, and at the same time corrects the anteversion.

Dr. Paul F. Munde referred to certain cases of nervous disturbance occurring during the change of life, and thought that while the symptoms might be manifold there was danger of attributing too little to them on one hand and too much on the other. The extremes should be avoided.

- Concerning dyspepsia and flatulence as a cause of prolapsus uteri, he thought that the primary cause existed in malnutrition, and consequent relaxation of tissues, and although the flatulence might aid in producing the displacement and aggravated the condition, the author of the paper had laid more stress upon it, perhaps, as a causative agent than he would be willing to do.

With reference to hemorrhage, with ulceration of the rectum, as a symptom in retroversions with fixation, the statement was rather new to him, and he would take pleasure in making investigations in that direction.

He thought Dr. Castle had overlooked the fact, in speaking of the treatment by vaginal and rectal distention with air, that the rectum itself, in very many cases, was also bound down, and would prevent the uterus from being lifted forward, and, therefore, the method would fail in a large proportion of instances.

The cradle-pessary, shown by Dr. Castle, Schnetter devised by elongating a ring, and bending it upon itself, and he had found it useful in cases of cystocele, and also anteversion, especially when its branches were flared outward. The trouble with all anteversion pessaries, however, was that they pressed too deeply into the wall of the vagina, and, sooner or later, were sure to do damage.

He was ready to take back what he had said in his book on the "Minor Surgical Gynecology" concerning the value of Gehrung's anteversion pessary. In addition, he had found that the instrument sometimes overdid the work and *retroverted* the uterus.

He was pleased with the latest modification of ante-flexion pessary which Dr. Thomas had given; namely, the open cup with a hinge. He had modified it by sinking the hinge, so as to lessen the liability to do injury to the soft parts. There were, however, two objections to the instrument: (1) It may produce erosion of the anterior wall of the vagina by pressure; and (2) it was liable to become foul from concealment of the discharges where they could not be reached by any cleansing injections.

Dr. Munde then referred to the plugging of the central hole in the nozzle of the syringe used for vaginal injections or douches, to which attention had long ago been directed, and also to the absorbing power of the vagina which he believed existed, although not equal to that possessed by the rectum.

Dr. T. A. Emmet thought that a great deal of the difficulty encountered with reference to the displacements, and the use of pessaries, existed in the lack of correct diagnosis at the beginning. A great deal of ingenuity had been wasted, from the fact that there was not a proper appreciation always of exactly what it was desirable to accomplish.

He did not regard anteversion of the uterus as a malposition, and, so long as the view was held that it was a malposition, just so long practitioners would be misled concerning it.

One of the commonest errors made was neglecting to examine by the rectum, in order to discover whether or not inflammation existed behind the uterus in the utero-sacral ligaments. A small amount of inflammation existing there would produce those symptoms which were commonly recognized as belonging to displacement of the uterus forward. Now, with inflammation behind the uterus, if an attempt was made to correct the anteversion by the use of a pessary, displacement would surely follow.

Another important point to be determined was, whether or not the irritation was due to the displacement, if one existed. The first impulse, nearly always, if prolapsus, or anteversion, or retroversion was present, was to correct the position of the uterus, and in his experience he had found it one of the commonest errors to attempt to force the uterus into *the* position which, as it was thought, it should occupy, without making a complete diagnosis. In such cases the use of a pessary did a great deal of harm. When the utero-sacral ligaments were inflamed, the symptoms could be relieved by lifting the uterus a trifle, just enough to relieve the vessels, and sometimes that could be done by means of Gehrung's pessary, or a small India-rubber disc, or packing the vagina with cotton, so as to restore the circulation. He thought that the importance of supplementing a vaginal by a rectal examination could not be too strongly stated, for a condition of affairs could be recognized by the latter which it was impossible to determine by the former alone. It mattered but little what the pessary was, so long as the object to be attained was properly appreciated.

With regard to vaginal injections, he would simply say that the woman who would not take them lying down should be prohibited from using them. The horizontal posture was as necessary to the emptying of the vessels as it was to the emptying of the varicose vessels of a lower extremity, and should be insisted upon. He always directed the patient to pass the nozzle of the syringe toward the well side, and as a rule, that precaution would avoid throwing water into the uterus.

Dr. W. T. Lusk said that the inflammation of the utero-sacral ligaments referred to by Dr. Emmet was an exceedingly important question. About ten years ago, Schultze wrote, and insisted upon the fact, that anteversion of the uterus gave rise to no bad symptoms, unless there was an

inflammatory deposit in these ligaments, and for the relief of that condition invented the cradle-pessary shown by Dr. Castle. Dr. Lusk had nearly discarded Gehrung's pessary. Perhaps, if it could be closely watched, it might be able to do much good, but in hospital practice he had always found it displaced soon after it had been inserted. He had found the pessary exhibited by Dr. Castle to be a very satisfactory instrument, but, like all anteversion pessaries, it must be removed from time to time, else damage would be done to the anterior vaginal wall.

In estimating the liability of the vaginal douche to produce serious symptoms, he thought another source of bearing-down pains, such as follow the entrance of water into the uterine cavity, should not be lost sight of, and that was excessive stretching of the vagina. In a certain number of well-authenticated cases, the vaginal injections employed after Kiwisch's method for the induction of premature labor, had been followed by local peritonitis, due, as was believed, to over-stretching of the vagina.

The President remarked that he had been interested for many years in the study of the functional disturbances incident to cessation of menstruation, and, according to his experience, laxatives and purgatives were useful in a certain class of cases and injurious in another. He regarded them as extremely useful where there was a tendency at the climacteric period to plethora, to become stout, and the patients suffered from palpitation and a feeling of pressure in the head, etc. In those cases he ordered the patient to take a saline laxative daily, for a few days, at the time corresponding to that at which menstruation usually occurred. But there was another class—that in which the patient suffered from cold feet and extremities, face flushed perhaps, tendency to vertigo, had shortness of breath on exercise, sense of depression, etc.—in which purgatives and saline laxatives would be the worst treatment, but, on the other hand, marked benefit followed the use of the bromide of potassium, eight or ten grains, three times a day, combined with iron—preferably the lactate. With reference to arsenic, there was no remedy more efficient in cases in which the nerve-tonic was needed, and in which the sense of depression and exhaustion were prominent symptoms. It was a remedy which he had used and recommended for many years, and with very satisfactory results. He had found it almost a

specific in the class of cases in which there was a small loss of blood daily, perhaps not more than a teaspoonful, but sometimes prolonged for weeks, and accompanied by great depression, though not the cause of it.

The President did not think that flatulence ever gave rise to anteversion of the uterus. In his early practice, when he had charge of a large clinic for diseases of women, and subsequently when in charge of a large hospital practice, he had not seen it as a cause of displacement in that class of patients, although he had watched for it in private practice among those in good circumstances and had met with it and made it a special indication for treatment.

As was well known, he was not an enthusiastic advocate of pessaries, and his conviction was that displacements had received more attention than certain general pathological conditions which were of infinitely greater importance, and, when removed, the uterus would of itself recover its position perfectly. He believed that it was a mistake very commonly made to regard the uterus as an organ which occupied a positive fixed situation; for it is constantly changed by the condition of the intestines, the bladder, position of the patient, etc., and the changes in position during utero-gestation are very marked. When, therefore, the attempt was made to treat it as though it should occupy a fixed position, a mistake was very liable to be made, inasmuch as its normal and physiological changes in position were extensive. He had found retroflexion, due to flatulence, very frequently, and had for many years made use of measures intended especially to correct that condition, such as combinations of nitric acid and nux vomica, with carminatives, perhaps with morphia, and with salicine, in ten or fifteen grain doses, when malarial poisoning manifested itself. When the displacement was associated with hæmorrhoids, he gave such agents as stimulated the hepatic function, as well as kept the intestines far from accumulation of gases. With reference to Gehrung's pessary, he had removed a hundred or more within a few years, and had used it in one or two patients. For cystocele in old ladies, he had employed it with benefit, when the financial condition of the patient was such as permitted him to give the pessary the attention which it really required.

Dr. Castle, in closing the discussion, said he intended

to be understood as saying that the treatment of retro-displacements, by means of inflating the vagina and rectum, would be of service only where the rectum was not bound down.

With regard to hemorrhage from the bowel in cases of retroversion with fixation, he had seen it without hæmorrhoids, and his explanation was that it was due to an abrasion of the mucous membrane, produced by the passage of hardened fæces through the narrowed canal.

A Contribution to the Pathological Anatomy of Lead-Poisoning.

THE speaker said that cases of lead-paralysis in which a post-mortem was obtained were so rare, and the pathology of the disease was so unsettled, that he ventured to offer the present contribution to the subject.

The clinical history of a patient suffering with lead-palsy was then given. The disease had lasted over two years, and showed itself with no unusual symptoms. (The facts regarding the paralysis are given in the discussion.) The patient finally died. A post-mortem was obtained, but under such difficulties that it was not so complete as could be wished.

The muscles were not examined, but they were not atrophied.

There was no change of importance in the brain or its membranes.

The changes were most marked in the spinal cord, from the decussation of the pyramids to the middle of the cervical enlargement. Below this point they gradually became less decided. The changes in this section were greatest in the gray matter about four ctm. below the decussation of the pyramids. At this part for a distance of two ctm. hardening did not take place well. Here there was increased vascularity. Many lymphoid cells were also present. The cells of the anterior horns were remarkably large. The only approach to a pathological change in them was in the upper cervical region. Here the outer of the two cell-groups of the anterior horns seemed to be affected, the cells being small and indistinct. The largest cells, in most cases, were normally developed. There were no positive changes in the fibers of the an-

terior roots, although in some cases there was an abnormal vascularity, and lymphoid bodies were seen lying between the fibers to a greater extent than usual. As regards the white columns, there was some thickening of the septa near the gray matter, and some spots of sclerosis in the antero-lateral columns. There was also a very slight appearance of sclerosis in the columns of Goll. On the whole, the speaker was inclined to consider the changes those of a very mild grade of myelitis.

A summary of the literature upon the subject of the pathological anatomy of lead-poisoning was then given. The observations and views of Bernardt, Vulpian, Friedlander, Zenker, Monokau, Morritz, Seguin, Bromwell, and others were given.

The paper being open for discussion, Dr. E. C. Spitzka, in response to a question, was told that the paralysis was bilateral, that it affected the upper extensors of the fingers chiefly, but also the index finger and the thumb. The deltoid was not paralyzed. The right side was rather the more affected. The atrophy of the cell-groups was quite symmetrical. The cells of the anterior horns were not smaller in size than normal, but the large cells seemed to be fewer in number, while the number of small cells was apparently increased. There were certainly many healthy cells, and Dr. Birdsall could not say positively that there was atrophy as regards the columns of Goll. There was an increased vascularity of that part. This increased vascularity, and an increase in the lymphoid elements were about the only changes observable.

Dr. Spitzka said that the localization of the atrophy interested him as a possible confirmation of a view previously advanced by himself, that the cell-groups of the outer part of the anterior horns innervated the extensors of the arm, and those of the inner part of the flexors. Some of the reasons for this view, based on comparative anatomy, were given.

Dr. M. Putnam-Jacobi discussed the question of the mode of action of the lead. It seemed to her a fact of very great interest that the three metals, lead, silver, and mercury had the common effect, in certain cases, of producing paralysis and other indications of a direct impairment in the nutrition of the nervous tissue. This was particularly the case with lead, in the use of which, so far as she knew, no symptoms of excitement were ever

observed, and in which almost all the pathological changes might be interpreted as due to interference with nutrition. The vascularity of the nerve-centers and cell-groups, described by Dr. Birdsall, might indicate a defective nutrition, since it showed, perhaps, a slackening of the blood-current. This question whether the action of the three metals mentioned was not primarily upon the nutrition, seemed of much importance in view of their extensive use medicinally.

The speaker asked whether there were any microscopical changes noted in the muscles of the intestinal walls; such as might explain the colic in lead-poisoning.

Dr. Birdsall said that no examination had been made by himself and he knew of no records of any. Dr. Birdsall exhibited microscopic sections of the cord.

Dr. Spitzka, after examining them, said that they did not, in his opinion, show the existence of myelitis. He thought the columns of Goll were quite normal.

Dr. Birdsall in reply, reiterated his opinion that there were, probably, slight inflammatory changes. He had at first been in doubt, but more careful examination convinced him that the cord was not normal. There was a spot of softening in the cord, and this, he admitted, was very likely post-mortem. But some previous pathological change was the primary cause. As regards the question whether the lesion in lead-paralysis was primarily in the cord or in the muscles, he acknowledged that there were many cases which seemed to show that the muscles were chiefly and first affected. Still he believed that the opposite view was not without support, and was, on the whole, the more reasonable one.

Dr. Spitzka referred to the experiments of Dr. J. J. Mason on frogs. He had fed these upon lead, and produced paralysis, though not the typical one seen in man. The nerve-cells were not found to be affected in these animals.

Can a Threatened Attack of Diphtheria be Averted?

DR. ALFRED SHEEN, Surgeon to the Cardiff Infirmary, writes to the editor of the London *Lancet* on this important subject. His question is based on this fact: He was called to see a young woman who had nursed her brother through

a fatal case of diphtheria. Four days after his death she was seized with general malaise, shivering and thirst. Pulse, 144. Temp. 103.4°. She did not complain of her throat, which, on examination, presented a normal appearance. She was given twenty-five grains of ipecacuanha powder at once, and one *m* of the tincture of aconite every quarter of an hour, for the first hour, and every hour afterward. The next day her pulse was 94 and temp. 99.8°. On the next day her *throat was painful and congested*, but no patches. She was ordered:—

R_x. Liq. ferri perchlor., . . . ʒ iv.
 Potass. chlorate, . . . ʒ ij.
 Glycerinæ, . . . ʒ ij.
 Aquæ, . . . ʒ vj. M.
 Sig.—ʒ ss every four hours, in water.

Two days afterward pulse was 76 and temp. 98°. Congestion gone and the girl said she was quite well. Dr. Sheen then asks: "Was this woman, when I first saw her, suffering merely from a sharp attack of febricula, brought on by fatigue, anxiety about her brother, and subsequent exposure at the funeral, or was she in the early stage of diphtheria?" He adds that, "As a rule, specific febrile diseases are not averted by treatment, but may that not be because we do not get hold of the disease early enough." (?) In view of the fatal nature of this disease, and the uncertainty surrounding its pathology and therapeutics (so great that a distinguished French lady has offered a reward of five thousand dollars to any one who may discover a preventive), this query is worthy of attention and investigation, and we will be glad to hear from our readers on the subject.

Milk Diet in Bright's Disease.

SINCE we know not at present any drug that possesses therapeutic value to any marked extent in this terrible and fatal disease, and since it is daily making sad havoc among human beings, and principally among that class who, by reason of their valuable public labors, are particularly necessary to the welfare of the world; therefore, it becomes a medical question of paramount interest, that we should discover some potent method of combating this

very prevalent disease. Some years since Carel first called attention to the treatment of Bright's disease by the use of a milk diet, and since then Duncan, as well as many other prominent physicians, has written on this subject. We have ourselves seen some remarkable results follow this treatment, while Dr. S. Weir Mitchell, of our city, is now quite an enthusiast on this subject. This method of treating a formidable disease has received sufficient distinguished endorsement to recommend it seriously to our notice. We would, therefore, ask all physicians who read this article to try this method of treatment, and to furnish us with their experience, which we will publish. The milk is used thoroughly skimmed and entirely freed from butter. To procure the best results, it has been advised that the patient shall restrict himself absolutely to milk, and continue the treatment for a long time. If it disagrees with the stomach (as it will in some cases), Dr. Mitchell advises that the patient be put to bed, and the treatment commenced with tablespoonful doses, to which lime water is added, until the stomach tolerates the milk, when from eight to ten pints daily should be taken, and absolutely nothing else. The sanction of such a distinguished physician as Dr. Mitchell forces us to seriously consider the merits of this treatment, and we trust to receive the experience of all readers of this journal who may have cases of Bright's disease to treat.—*Med. and Surg. Reporter.*

Ephidrosis.

THE above name has been given to a disease of an unknown nature, but characterized by profuse sweats, returning at variable intervals, usually, every year, at the same date. That distinguishes this morbid condition from the sweats attending intermittent fever, or the colliquative sweats in phthisis, or those in miliary fever. Ephidrosis is chiefly met with among sufferers from constitutional gout, among hypochondriacs, and in certain neurotic affections unattended by gout, but in which sudation seems to be the result of nervous perturbation. Several instances have been observed which may be likened to the following case described by Dr. Olivier, in 1881, in the *Arch. de Med. Nav.* A non-commissioned officer was admitted to the

Toulon hospital, having, for a month past, been suffering from profuse sweats. He had contracted intermittent fever in 1862, and since then was subject to such attacks every year. These copious sweats continued after the patient's admission; his garments and bed clothes being thoroughly saturated by the liquid thus abundantly secreted each day, from nine in the evening till midnight. The sweat was liquid, acid, then alkaline, and its temperature that of the body. The skin was turgescient, and congested, but of normal temperature. The sweats were often preceded by a chill, and when they were over the patient slept, and only complained of fatigue. During his stay at the hospital some prurigo was noticed, also some erythematous and lichenous eruptions, attended with itching. Otherwise all the other functions were normal.

Mr. Olivier attributed this hyperhydrosis to a psychical cause. He classed it with Spring's phrenopathic variety, and believed it due to moral emotions, from which the patient often suffered. Country air, absence from care, and tonic medication, combined with hydrotherapy and antispasmodics, were found of greater benefit to the patient than all the remedies administered while under treatment at the hospital.

This case might also be considered as resulting from *larvated fever*.

Some of the Applications of Abdominal Section.

BY THOMAS SAVAGE, M. D., M. R. C. P., LOND.

For Nephrotomy and Nephrectomy.—Abdominal section applied to the surgery of the kidney has of late made considerable advances, owing to work done by Simon, Martin, Czerny, and, more recently, by Thornton and A. E. Barker. Nephrotomy and nephrectomy may be deemed suitable in some few cases in the early stages of encephaloid and sarcoma, in hydronephrosis, especially where there is alternate filling and emptying of the cyst; in pyonephrosis, where the patient is in a state of hectic, or rather, before, if possible, that stage has arrived, and for the removal of a calculus in the ureter or in the pelvis of the kidney; also for certain cases of floating or movable kidney, attended with very great suffering. Martin,

of Berlin, has had eight cases of nephrotomy, six of which were for "wandering kidney." He makes his diagnosis of these by double palpation before and behind, as suggested by Freund, and it is confirmed by the exploratory incision. He suggests, as a precaution, that we should, before removal, ascertain if the patient has only one kidney or a horse-shoe one, when, if so, we should, of course, not remove the diseased one. Of his eight cases, five recovered, and three died. They were all abdominal operations.

The operations on the kidney by the Lumbar method will not, of course be discussed here. The diseases most suitable for treatment by it are abscess or pyelitis, calculus, and malignant disease. For the removal of the kidney there are certain difficulties connected with the operation which may be mentioned. First, there is the thickness of the pedicle or the base, which at so great a depth from the anterior surface of the body may prove a considerable hindrance to successful ligature, and subsequent cutting off. Of course the clamp is out of the question for the *entire* removal of the kidney, as the meso-nephron would, I imagine, seldom be long enough to be brought to the abdominal wall; and kidney tumors are often very deceptive in this respect, often appearing to be fairly movable in all directions nearly all over the abdomen, but found, when the abdomen is opened, to be in reality rather firmly bound down. There is, secondly, the difficulty of having to pass a ligature round so short vessels as the renal artery and vein are; and there is, thirdly, the question whether, when a ligature has been passed, the shortness of the vessels, and therefore the close proximity of the ligature to the great vascular trunks, will not prevent thrombosis occurring on the proximal side of the ligature, and hence permanent occlusion.

In a patient who was under my care with hydronephrosis, I opened the cyst, evacuated the fluid, and finding the cyst was made up of true kidney structure, and fixed at its base, I applied a clamp round the mass, removing about three-fourths of the kidney. The remainder of the organ, after the clamp had separated, for many weeks continued to secrete a small amount of urine through a fistulous opening, but it eventually stopped, and the patient is now in perfect health. Another had a left renal tumor, which filled and emptied about once every fortnight or three weeks. This process had existed for several years, and

was attended latterly with much suffering, and often with vomiting; patient was getting thin and quite unable to do her work. The tumor usually occupied three days in filling, and, during this time, her urine was scanty; it remained full about two or three days, and it then emptied rather suddenly, this being always coincident with profuse urination. The urine has a s. g. of 10007, and contained a very small quantity of albumen. I made an incision of about three inches in length in the middle line, the upper point being about the level of the umbilicus. The cyst was tapped and opened. The edges of the aperture were connected with the abdominal wound. None of the contents of the cyst escaped into the peritoneum. Patient died on the sixth day, the last 24 hours having been passed in a state of convulsion and partial unconsciousness. At the p. m. there was no trace of peritonitis, but the right kidney was found to be granular, with a narrow cortical portion and an adherent capsule. The case is mentioned to show that nephrotomy is practicable and simple, and may be performed with a general expectation of success. The cyst proved to be in each of the two instances in which I have operated on a hydronephrosis, a dilatation of the kidney structure itself. In neither case could any trace of a calculus be found, and in the latter one the ureter was determined to be quite pervious. Professor A. R. Simpson gives as a possible cause of this dilatation a kink or folding on itself of the ureter; and in addition to those generally mentioned, Stadfeldt, a Danish writer, says that "inflammatory affections of the peritoneum and the ureters have certainly also an influence; the latter more frequently, however, as a consequence of the retention of urine." Hydronephrosis with dilatation of the ureters and enlargement of the bladder has been said to result from the displacement of the base of the bladder in cases of prolapse of the uterus. It has to myself often been a matter of wonder why the intensely board-like hardness in the pelvis, which is so often felt in a case of parametritis, completely fixing the uterus and vaginal roof, should not compress the ureter, cause retention of urine above it, and so give rise to hydronephrosis. It is well known to be a much more frequent affection in women than in men. In tapping and draining a renal cyst, of course especial care would be required to prevent the

intrusion of any of its contents into the peritoneum, on account of the excessive acidity of an urinous fluid.

For Splenectomy.—Hydatid disease of the spleen is a rare disease, and generally, unlike that affecting the liver, a secondary one. The most frequently occurring affection of this organ, for which operative measures may be deemed advisable, is hypertrophy. The spleen has been successfully removed, but only a few times; the mortality having been very great. I have opened the abdomen on three occasions, with a view, if possible, to remove the spleen. In the first case the patient was very weak and worn down by the disease; at the operation there were a few adhesions inadvertently broken through which caused a little hemorrhage, and from the effects of this, added to her previous low state, the patient died. The tumor was a very large one. The other patient had only a small exploratory incision made of $3\frac{1}{2}$ inches in length, but she also died, apparently of exhaustion. The third case, was a patient who had a splenic tumor; and, before admission, had suffered from a most severe hemorrhage from the intestines, which had completely blanched her. After gaining a little color and strength, I made an exploratory incision, and finding the tumor incapable of removal, I closed the wound. She got fairly well from the operation, but shortly afterward died, never having really recovered from the very great hemorrhage.

From the foregoing experience, I am inclined to look with much disfavor upon an operation involving the spleen. The attachment of the spleen is deeply seated, and unsuitable for forming a stump or pedicle. The mobility of the organ, when a little enlarged, and before operation, is very deceptive; whereas it may appear fairly mobile to the touch and likely to be removable, it will, at the operation, be found to be comparatively fixed. It would seem, at least from my experience, that a splenic tumor requires, when the abdomen is opened, special care and gentleness to avoid the effusion of blood or the rupture of adhesions.

For Intestinal Obstruction.—Perhaps the greatest development in abdominal surgery, in the near future, will be in the direction of the treatment of intestinal obstruction. Very many of these cases are at present allowed to die without any attempt being made to ascertain or to remove the cause. And it happens that up to now, little has been done or written upon the subject of opening the

abdomen for obstruction, so that when it has fallen to the lot of a few operators to have had a large number of cases for observation and treatment, there will rise up an entirely new experience, and a literature of its own, for our future guidance. I look upon it that as much, if not more, has to be learned in this department of abdominal surgery than in any other.

Intestinal obstruction is often divided into two classes, according as the large or the small intestine is the seat of the obstruction. It is when the seat of the obstruction is in the small intestine that we may look for the greatest aid from exploring the abdominal cavity, since it has been found that the part most often strangulated, either by loops, bands or adhesions, is the lower portion of the ileum, although the colon is sometimes constricted by old inflammatory bands; and the same applies to twists, which are more frequently found in the small intestines. Dr. Habershon says that the sigmoid flexure, especially in old persons, where there has been previous constipation, will bend upon itself, and fall over into the pelvis. Again, cases of intussusception, involving prolapse of the ileum into the cœcum, and obstruction due to the character of the contents of the bowel, will be more frequently found in the small intestines. Fæcal accumulation of itself rarely, if ever, causes fatal obstruction, though, as Dr. Habershon remarks, death may arise from the violent remedies employed, as from strong purgatives, or as when the injection of very large quantities of fluid have been followed by a fatal collapse. A gall stone may be the cause of the obstruction, and here is a field open for successful surgical aid. I have myself met with one case where, *post mortem*, a large gall stone was found to be the cause of the fatal illness, being impacted in the jejunum; and Mr. H. R. Ker, has recently, before the Midland Medical Society, read the interesting details of a case where he opened the abdomen, searched for and found the stone, opened the intestine, and extracted it. This case was not successful, so far as the patient's life was concerned, but it will tend to show what may be expected to be gained in this direction when the operation is undertaken earlier, and when more perfect means of uniting the severed edges of a wound in the intestine are attained. The symptoms, therefore, from which we should predicate that most benefit would accrue from an abdominal section

would be early vomiting, moderate and center distention of the abdomen, absence of urination, and the character of the vomited matters being rather bilious and fæcal. In the operation, it may be said to be best to try first to find the seat of obstruction on the right side of the abdomen, because the ileum is the part of the intestine most frequently involved, and a gall stone would generally be found high up in the duodenum or the upper portion of the jejunum; also, because an intussusception would occupy this side. In the case of there being found more than one constriction in the calibre of the intestine, the propriety of excising a portion, more or less long, of the intestine in its entirety, as recommended by Kœberle, is worthy of consideration. It may be found, after making an abdominal section, that the seat of the disease is in the large intestine, *e. g.*, cancerous disease of the sigmoid flexure, and that a colotomy would have been the better proceeding. Under such circumstances the opening in the left loin may be at once proceeded with, and it may be regarded that the abdominal section will be found not only to have done no harm, but that it has been a preliminary which has led to a more accurate diagnosis, and has also been an aid for the safer and easier performance of the colotomy.

MICROSCOPY.

Letter from New South Wales.

SEVERAL months ago, in corresponding with a subscriber of the *MEDICAL NEWS* in *New South Wales*, which our readers are aware forms a portion of Australia, we requested him to kindly send us, if able, some specimens of diatoms found in his country. In due time we received, inclosed in a letter, a package of "diatomaceous infusorial earth," obtained in Victoria, and exhibited at the International Exhibition recently held there. Our subscriber, Dr. Henry M. Marshall, states that this earth is used for preparing dynamite by saturating it with nitro-glycerine. It has the appearance of pulverized chalk. It is composed entirely of diatoms, small, but having beautiful markings. When the blade of a pen-knife has been passed

into it and shaken the apparently small amount of white dust still adhering when scraped upon a glass slide will be found, by the microscope, to be composed of thousands of diatoms. A silver three-cent piece, we would judge, would hold enough to mount seven hundred slides. We have sent a portion of the earth to our friend, Mr. C. L. Peticolas, of Richmond, Virginia, to be mounted. When we have heard from him we will give our readers a further description of the earth.

We add a letter which Dr. Marshall inclosed to us, addressed to him by a geologist of New South Wales, in reply for information solicited on our behalf. We here express our thanks to Dr. Marshall for the trouble he has taken to favor us.

“DR. MARSHALL:

“*Dear Doctor*—Relative to your inquiry as to the existence of ‘minute fossil organisms’ (infusorial animalculæ) in the rock formation of this portion of Australia, and the probability of my being able to procure specimens of an interesting nature for transmission to your esteemed friend, Prof. Thacker, of Cincinnati, U. S. A., I beg to state that the geological formation which here extends over a very large area is composed of the primary system of rocks, comprising silurian (upper and lower), slates and sandstones, mostly metamorphic—highly silicified and indurated—intersected by intrusive igneous belts of granite; dykes of greenstone, serpentine; porphyry and diorite, and massive gneissose formations with (on the table-lands of the Alps) cappings of basalt of great extent and thickness, covering extensive, but as yet unworked, auriferous tertiary deposits.

“From an intimate acquaintance with the rock formation of a great extent of the Australian Snowy Alps, and with the lithological character of the bounding ranges, from the sources of the Tumut and Murrumbidgee Rivers to this town, I may state that during a long period of close observation I have failed to discover any remains of organic life in the silurian rocks, and this I attribute to the intrusive outbursts of igneous rocks everywhere, giving evidence, by their appearance, of the great heat which accompany these volcanic eruptions; altering the character of the adjoining sedimentary rocks, and must have obliterated all traces of any minute organisms that

may have previously existed in the silurian slates and sandstones.

"Mount Parnassus, on the southern slope of which this town of North Gundagai is situated, is partly composed of a wide dyke of greenstone, intersected by veins of 'asbestos' and of steatite, and partly of altered silurian slates and sandstones, in which quartz reefs and leaders are to be found, the probable source of those deposits of gold which was found in the now deserted alluvial auriferous workings immediately below the hill. In the valley on the northeast side no trace of fossils is discernible in these silurian rocks, nor in any of the surrounding localities, and most probably, if previously existing, were destroyed at the period of volcanic action lately after.

"Crossing the river Murrumbidgee, I proceeded in a southeast direction from the town of Gundagia, south, a distance of about nine miles, to a locality known as Tarrabandia. There I examined a remarkable deposit of highly crystalline marble, which occupies a deep and wide fissure in the silurian formation. This marble deposit is 40 yards in width, 140 yards in length, visible on the surface, and has been opened out to a depth of 30 feet. Immense blocks of nearly pure white saccharine-looking marble, alternating with portions marked with pale grey bands; and although at first I was in hopes that here I should be successful in obtaining fossil specimens, I had ultimately to give up the search, as I could not find any evidence of their existence in this sedimentary rock. I have examined the Pliocene tertiary, and also the more recent Pleistocene quartz and granite boulder drifts, and the more recent auriferous gravels that underlay the alluvial flats of the river and creeks, and at the sites of abandoned alluvial gold workings; but with no success, in a palæontological point of view.

"And I have come to the conclusion that the only locality near to Gundagai where fossils might be obtained is at a point on the Yasp River, about two miles below the town of Yasp. There, under a high cliff, are beds of calcareous sandstones, sandstone shales, and coralline limestones and conglomerates, traversed by thin dykes of greenstone. The limestones are rich in fossils, containing favosites, polymorpha, favosites, gothlandica, with other corals, encrinites stems, and many specimens of silurian and

devonian fossils. A large collection of fossils from these beds was sent to Europe by the Rev. W. B. Clarke, M. A., F. R. S., T. G. S. U., for the examination of Prof. De Konnesk, and mentioned in report thereon in the *British Geological Magazine* of August, 1876.

"In the limestone caves, six miles south of the town of Wellington, inspected by the late Prof. Thomson and Mr. Krefft, late Curator of the Australian Museum: 'These rocks have a semi-metamorphic character. The fossils comprise a stromatophora, receptaculites, favosites, holysites, tentaculites, theobites, cænites, pentamaras, rhynchonella, orthis-spirifer, atrypa, reticularicus, and others; strophomena, pterinæa, grainnysia, loxonemena, euompholus, orthoceras, litvites—thus indicating a portion of a wide-spread formation, in a meridional direction' (we have quoted from report). The report of Mr. Krefft is referable either to upper silurian or devonian age. I may also state that the characteristic features of the district of Gundagai are broad alluvial flats on the wide river or creek; valleys, inclosed by undulating wooded ranges and lofty mountains, from the rugged summits or steep sides of which protrude massive rocks of silurian, of granite, or of volcanic formation. These mountain ranges increase in altitude, in ruggedness of aspect, and are clothed with deeper forests, and the river valleys become more contracted, ultimately deep rocky gorges, as they stretch upward toward the snowy peaks and lofty basaltic capped table-lands of the Southern Alps, distant some one hundred miles away.

"Where gold workings are still in active operation, mining for the precious metals in these mountain localities being as yet in its infancy, as the immense auriferous deposits of tertiary gravels and auriferous drifts underlying the great basaltic table-lands of the Higher Alps are as yet unworked, at present neglected by the people of this country, who are at present seemingly only interested in acquiring land, and following the more unexciting but profitable pastoral occupations.

"I may state that in the beginning of the year 1876 the New South Wales Mining Department collected upward of 748 labeled specimens of rocks, fossils and minerals, characteristic of the formations of this colony, and forwarded them to the Centennial Exhibition at Philadelphia, affording the scientific world of America an op-

portunity of investigating the fossil fauna and flora of this colony; and I have learned that the principal portion of these exhibits were presented to the Smithsonian Institution of U. S. A.

"As my old comrade in prospecting and exploration, in Victoria, Alfred William Howett, has of late applied himself, in intervals of his duties as Chief Magistrate and Warden of the Cyiff's Land Gold Fields, to microscopic investigation, more particularly with reference to the structure and composition of rocks, I would endeavor to be the medium of communication between Prof. Thacker and Mr. Alfred William Howett, member of the Microscopic and Royal Societies of Victoria, so that by interchange of scientific correspondence between gentlemen, who are, I dare say, both very enthusiastic in this pursuit, they may derive a mutual pleasure, and add their mite to the benefit of science and discovery.

"I have the honor to remain, dear Dr. Marshall,

"Faithfully yours,

"WILLIAM HENRY SHORT, P. E."

GLEANINGS.

INSANITY AS A CAUSE FOR DIVORCE.—In the Divorce Court on Friday, December 16th, a very important case was settled in reference to insanity. The case was Hunter vs. Edney. In this case a woman was married, but refused on the wedding night to allow the marriage to be consummated. The husband sent for the mother of the woman, who took her home after she had been seen by Dr. Miskin, a general practitioner in the neighborhood. Dr. Miskin was of the opinion that then she was insane. Some few weeks later Dr. Savage, of Bethlehem, saw the case, and decided that the woman was suffering from melancholia, and not fit to enter into a contract, and that in his opinion she had so suffered for some time. The whole case took but a short part of one day, and there was really no opposition, for, although the wife was in court, and elected to go into the witness-box, she did not deny any of the statements made, but said that she had no knowledge of some of the things which were proved to have taken place during the time soon after her wedding. Thus she did

not remember, so she said, making an attempt to strangle herself. The judge, Sir J. Hannen, summed up clearly and fairly, and pointed out that the woman did not appear capable of understanding actions free from the influences of delusions, and was therefore incapable of entering into a contract like that of marriage, and he decreed the marriage null. This is the first case of the kind which has been decided, and is not by any means a solitary one, so far as the insanity and marriage are concerned. During the past year several cases have, we believe, been in Bethlehem, in which marriage was not consummated in consequence of insanity. In one a man heard a voice telling him he must not touch his wife, and the same patient later heard a voice telling him not to eat. The case decided is a first one, and is incomplete. What line would have been followed if the marriage had been consummated, and still more, if a child had been begotten? The inability to contract would have been the same, but we fear there might have been greater difficulty to persuade a jury—if a jury had been deciding—that a divorce was justifiable. In murder cases the feeling of many is moved against taking human life, but the life-long misery caused by an unjust marriage, in which one of the contracting parties was insane, is a suffering of the innocent which is unhappily overlooked. Such cases make it all-important that something should be done, and every step, such as the one reached in the above decision, carefully watched.

—*London Lancet.*

THE TREATMENT OF SPERMATORRHEA.—In all classes of seminal incontinence, with rare exceptions, the remedies at the onset should be directed to overcoming the sensibility of the mucous membrane of the urethra, of the ejaculatory ducts, and of the seminal vesicles; to subduing the irritability of the muscles concerned in ejaculation; and to diminishing the reflex excitability of the genito-spinal center. Hence, they should be of a calming and sedative nature. By the ignorant and indiscriminate employment of strychnia, cantharides, phosphorus, damiana, and cold sitz-baths, or affusions during the stage of hyperæsthesia, much harm is done, and the therapeutics of spermotorrhea are brought into disrepute.

Premising the statement that tonic should follow the sedative plan of treatment, I will now give an outline of

my view as to the best management of the varieties of the affection:

Under all circumstances thirty grains of bromide of potassium along with about ten drops of the fluid extract of gelsemium (Bartholow) every eight hours, and one-sixtieth of a grain of sulphate of atropia (Rosenthal) on retiring, are worth all the other internal remedies combined. In anæmic subjects the bromide may be administered at night, and quinine and iron be exhibited during the day; but if the bromide be badly borne, it should be guarded, or its cumulative action must be prevented by promoting its excretion by the urine, combining it with a diuretic, as ten grains of nitrate or bitartrate of potassa (Rosenthal). This combination is far better than that with Fowler's solution (which is advised by Gowers and Bartholow), or it may be replaced by twenty grains of chloral. Not only does atropia diminish reflex mobility of the genito-spinal center, but the recent researches of Kenchel, Heidenhain and Stricker and Spinner show that it paralyzes the movements of the cells of the acinous glands and checks their secretion, so that it can not be dispensed with.—*College and Clinical Record*.

TREATMENT OF HYDROCELE AND SEROUS CYSTS IN GENERAL BY THE INJECTION OF CARBOLIC ACID.—Dr. Levis states that he has been experimenting with a view of determining what substance may best secure the obliteration of the secreting surface and the adhesion of the walls of the cyst with the most certainty and the greatest freedom from suffering and danger. Having selected carbolic acid as an agent, which would provoke simply a plastic inflammation, he injected one drachm of the deliquesced crystals into the sac of a large hydrocele. The new procedure was entirely painless. A sense of numbness alone was experienced, and no inconvenience was felt, until on the next day the desired inflammatory process was developed. A nine years' hospital and private experience leads the author to believe that this method is the most satisfactory for the object. For the purpose of injection, crystallized carbolic acid is maintained in a liquefied state by a five or ten per cent. solution of either water or glycerine; the crystals are to be reduced to the fluid state with no more dilution than may be necessary for this. After the usual tapping, he injects the liquefied crystals with a syringe

having a nozzle sufficiently slender and long enough to reach entirely through the canula. He has never been able to detect any general toxic effects upon the system, but believes that the action of strong carbolic acid on surfaces secreting albuminous fluids is to seal them, to shut them off from the system in such a manner that absorption can not really take place. The occluding influence of strong carbolic acid he regards as an important surgical resource in certain cases of compound fracture, destructively lacerated wounds and ulcerating surfaces, where septic infection is inevitable. All forms of serous cysts, which are usually subjected to any form of operative treatment, on the principle of producing plastic adhesion on their walls, may be deemed amenable to the treatment indicated.—*Medical Record*.

PYEMIA FROM OTITIS.—At a recent meeting of the Pathological Society of Dublin, Dr. Walter Smith (*British Medical Journal*) showed the left petrous bone, cerebellum, and lungs of a young man of 21, who had enjoyed good health until December 23d, 1881, when severe pain suddenly set in in the left ear and left side of head. Next day there were rigors, sweating, and vomiting. Was admitted into hospital January 1st. There was no history of any discharge from either of his ears. The temperature ran a completely typical course—on one occasion it fell to 96.7°, on another it rose to 107.4°. There was a similar want of accordance between the pulse and respiration records. There was complete absence of any paralytic symptoms, general or special. The sputum was rusty and streaked with blood, but physical signs of pneumonia were not discovered until January 9th. The cerebral symptoms then became latent. Examination revealed bulging of left membrani tympani, but there was no perforation or otorrhœa. After increasing dyspnoea, death ensued on January 15th. Spleen was found large and pulpy, weighing ten ounces and a half. There was some left pleural effusion; foci of embolic pneumonia were found in the left lung. The right lung was tough, non-crepitant, and in places quite gangrenous, with several softening, embolic pneumonic patches. Necrosis of the pleura was well marked on the surface of the lung. A small, greenish, abscess was observed in the cerebellum, below the left corner of the pons varoli. A thrombus lay in the left lateral

and superior petrosal sinuses. The left petrous bone was diseased and very fetid. The cavity of the tympanum was full of brown, grumous stuff, and its roof was broken down and perforated.

NUTRIENT SUPPOSITORIES.—Dr. H. E. Spencer thus writes in the *Practitioner*: Artificially digested meat is mixed with a little wax and starch, and made into a suppository. These suppositories are of such a size that the digested and extracted product of twenty ounces of meat from which the insoluble matter is removed is contained in about five suppositories. It is easy for most patients to introduce them themselves; and their use is attended with no discomfort whatever, in the majority of cases. After an hour or two, the waxy basis is frequently returned, the peptone and extractive being absorbed. In some few cases, owing to irritability of the rectum, the whole suppository has returned; but this can be obviated by the addition of a little opium. He has had excellent results from their use in cases of gastric ulcer, stopping all food by the mouth for a fortnight or so, and ordering the patients to insert a suppository every four hours. Great relief was obtained by the same means, in case of cirrhosis of the liver, where gastric irritation was a prominent symptom. The life of an old lady dying from gastric carcinoma was prolonged for several weeks. An immediate improvement took place as regarded the pain, sickness and prostration, and the patient was enabled to sit up and make her will. It is true that the amount of food administrable in this way is very small, but every practitioner who has had cases of obstinate vomiting under his care knows how minute a quantity of nutriment will “keep body and soul together” for several weeks or months.

CHOREA TREATED BY ARSENICAL SOLUTION.—The worst case of chorea I have seen occurred during last winter. The patient, a girl aged twelve, was suffering from rheumatism, and she was taken into a house adjacent to her mother's to see a lady who had died. The same night involuntary twitchings of her body were observed, and these increased in severity to such an extent that three days afterward, on her admission to the hospital, she was unable to remain quiet for even a few seconds. It required three nurses to take off her clothes, so frequent and so violent were the movements. When placed in bed

she rolled about from side to side, and required continuous and careful attention. On attempting to give her liquid food, it was ejected by the constant motion of the tongue; and only at intervals, when the movements were less pronounced, was any retained, and that was effected simply by watching an opportunity, and pouring the contents of a spoon into the mouth. She was utterly unable to walk or stand. A cardiac murmur was heard after the first sound of the heart. Arsenical solution was given at first in three minims, and latterly in seven minims, daily. In the course of a week improvement was manifested, and when the constitutional symptoms of the drug three weeks afterward showed themselves, the convulsions entirely ceased. The murmur remained.—*Dr. Charteris, in London Lancet.*

PRURITIS VULVÆ RELIEVED BY IODIDE OF POTASSIUM.—At a meeting of the St. Louis Medico-Chirurgical Society, Dr. Bryson related the following case: Having under treatment a patient suffering from fistula in ano and urethral stricture, he learned that the man had syphilis, and gave him constitutional treatment with potassium iodide while he was dilating the stricture. Not long after, he was called to treat the wife of this patient for most intolerable pruritus vulvæ. The general condition of the woman seemed to be very good; but she had been married seven years without bearing any children, and had once aborted in the third or fourth month of pregnancy. These facts, in connection with his knowledge of the husband's history, led the doctor to suspect a syphilitic taint in this woman; and he prescribed potassium iodide in doses of three grains three times a day, which was gradually increased to ten grains three times a day. No local treatment was used, and in three days the distressing pruritus entirely disappeared. The iodide was continued for some weeks longer, with marked improvement of the spirits and health of the patient.

There was no eruption or other lesion characteristic of syphilis apparent about the vulva, and Dr. Bryson considers that the trouble was due to an obscure syphilitic nerve affection.—*St. Louis Courier Medicine.*

THE EFFECTS OF OIL OF TANSY.—Dr. G. Jewett (*Boston Med. and Surg. Jour.*) reports eight cases of poisoning with this drug. Case 1: Fifteen drops at 11 A. M., teaspoonful at 2 P. M.; convulsions, shock, general cyanosis;

recovery. Case 2: Teaspoonful to promote catamenia; convulsions and death in one hour and a half. Case 3: Unknown quantity to cause abortion; convulsions: death in three hours and a quarter; no abortion. Case 4: Teaspoonful to cause abortion; coma, recovery; no abortion. Case 5: Four drachms; spasms and death. Case 6: To cause abortion; rapid death; no abortion. Case 7: Decoction of tansy-leaves to produce an abortion; paralysis; coma; death in twenty-four hours without abortion. Case 8: Infusion of leaves daily for a week; also for vaginal injection; abortion, metritis, peritonitis; recovery after three months. As druggists are often asked for oil of tansy under various pretenses, we believe the above table will be useful in reminding them of the dangers attending the sale of tansy and its preparations.

ATROPIA-POISONING TREATED BY ESERINE.*—Mr. R., æt. 34, took by mistake $\frac{1}{2}$ grain sulph. atropia and $\frac{3}{4}$ grain sulph. morphia at 6.30 P. M. Gave him 30 grains sulph. zinc. Grew rapidly worse, and soon became comatose; pulse, 136; resp., 36; administered one grain sulph. morphia hypodermically at 9.10 P. M. This produced no change, and in about 15 minutes he had a convulsion. Electricity was continued for an hour with only a slight improvement in respiration. At 10.45 P. M. obtained eserine and administered $\frac{1}{16}$ gr. hypodermically. In 15 minutes he asked for a drink. He vomited freely, and walked to the ward assigned him. At 1.30 A. M. found him comatose. Pulse, 120, very weak; resp. 14; pupils as widely dilated as when first seen. Gave $\frac{1}{4}$ grain of eserine hypodermically. He began to improve at once, and in ten minutes was perfectly rational. At 6 A. M. found him sitting up and anxious to leave.—*Louis. M. News.*

BICARBONATE OF SODIUM IN TONSILLITIS.—M. Gine, Professor of Clinical Surgery, at Madrid, affirms that the repeated application topically of bicarbonate of sodium is of incontestable efficacy in tonsillitis. The powder may be projected through a tube on to the inflamed parts, or applied directly with the finger.

The relief is often immediate, and the cure often rapid, sometimes requiring but twenty-four hours. The application is rarely inefficacious, and often aborts the disease in its prodromal stage.

*Eserine is an alkaloid from the calabar bean.

M. Gine also considers these applications of great benefit in hypertrophy of the tonsils, often obviating the necessity of an operation.—*New Remedies*.

COVERING NAUSEOUS MEDICINES.—Dr. Stillwell, after protesting (*Med. Times*) against the prevalent practice of prescribing very nauseous medicines in unnecessary bulk, supplies a formula for an elixir that he keeps prepared, half an ounce of which added to a four ounce mixture containing disagreeably tasting medicines (as bromide and iodide of potassium, bi-chloride of potassium, or sodium, sulphate of quinine, etc.), covers a multitude of imperfections in a prescription, as regards color, taste, etc.
R.—Cort. aurant. rec, ʒj; sem. anisi. contus, ʒij; sem. cardam. contus, ʒj; sem. fœniculi, ʒij; cocci. cacti, ʒj; sacchar. alb, ʒxxxvj; spt. vini rec, ʒiv; Aquæ, Oiss. Macerate in the alcohol and water for four days, filter and dissolve the sugar by the aid of a gentle heat, and strain while warm.

TO COVER THE ODOR OF IODOFORM.—According to S. Hoenig, the best means of covering the color of iodoform is cumarin, one grain of the latter being sufficient for about forty-five grains of the former. The odor of cumarin can be perceived in the mortar after several days, even when most carefully cleaned, while the iodoform odor disappears immediately.—*Pharm. Zeit.*

Note.—Cumarin is prepared both from tonka beans, and occasionally other plants containing it, but most generally it is manufactured synthetically from salicyl-aldehyde. One ounce of cumarin is said to be equal to about three pounds of the best tonqua beans. Its price is about six dollars an ounce.—*New Remedies*.

CURE OF GOITRE BY FLUORIC ACID.—Dr. Edward Woakes gives, in the *Lancet*, a detailed account of a number of cases of goitre cured by fluoric acid internally. He begins treatment with fifteen minims of a one-half per cent. dilution of the acid three times a day, and, if necessary, increases the dose to twenty, thirty, forty or even seventy minims, and extends the time to several months. His results are quite remarkable, even in cases that had resisted iodine, bromine, iron, etc. In a few it was conjoined with injections of tinct. iodine. Very few failed to be reasonably benefited, and in eighty-five per cent. the cure was decided.—*Louisville Medical News*.

BOOK NOTICES.

ANESTHESIA AND NON-ANESTHESIA IN THE EXTRACTION OF CATARACT. With some practical suggestions regarding the performance of this operation, and comparative statistics of two hundred cases. By Hasket Derby, M. D., Surgeon to the Massachusetts Charitable Eye and Ear Infirmary, to the Carney Hospital, etc. 12mo. Pp. 32. Cambridge: Riverside Press.

We extract from page 7: "With us in Boston, at any rate, for nearly twenty years past ether has been habitually used at all operations for the extraction of cataract. At the meeting of the American Ophthalmological Society in 1867, there was a general expression of opinion in favor of this practice. In 1866, Dr. E. Williams, of Cincinnati, stated, at the meeting of the same society, that he had changed his mind on the subject of anesthetics in extraction, and now never gave them except in the case of persons who have little or no self-control, or who refuse to make the trial. No similar public avowal was, however, to my knowledge, made among us for the next ten years, and at the present moment it is probable that anesthesia is at least as much the rule as the exception throughout this country. Certainly, save in a short article by myself, its disadvantages have not been seriously discussed. My own experience has thoroughly convinced me *that the state of anesthesia throws appreciable obstacles in the way of successful extraction, and that its regular employment tends to diminish the number of favorable results that would otherwise be obtained.* I have consequently discarded its use, save in exceptionable cases."

The writer proceeds to argue at considerable length against the use of anesthetics in extraction of cataract.

THE INCIDENTAL EFFECT OF DRUGS, A PHARMACOLOGICAL AND CHEMICAL HAND-BOOK.—By Dr. L. Lewin, Assistant at the Pharmacological Institute of Berlin, Translated by W. T. Alexander, M. D., 8vo. Pp. 239, New York: William Wood & Co. Cincinnati: R. Clarke & Co.

Our readers will find this work treating of the incidental effects of drugs highly interesting indeed. It is the only work with which we have ever met, or, in fact, have ever heard of, devoted to the consideration of this subject. Surely the *incidental effects of remedies* is a most inter-

esting and important topic, and merits the careful consideration of every physician. Here and there, in various works, these incidental effects are mentioned, but we know of no other work than the one before us in which they are considered at length, and form the subject of discussion.

In the way of illustration, we will mention that, sometimes, the administration of a medicine is not only not followed by its normal effects upon the physical system, but by none at all. In some instances, however, instead of the normal effects, there will be certain incidental phenomena following the exhibition of a drug. The administration of quinine is not uncommonly followed by the appearance of a polymorphous exanthema, or, in very rare cases, intense effects upon the organ of vision, manifested by permanent amaurosis. The usually somewhat inert codliver oil may cause vesicular eruptions, iodide of potassium induce hypersecretion from the ocular and nasal mucous membranes, and salicylic acid excite, among other effects, sweating and phenomena of irritation of the nervous system. The causes of such incidental phenomena, as our author states, may be either peculiar to the individual, or dependent upon temporal or local influences, on the quality of the drug.

The various drugs whose incidental effects are described are treated under the head of tonics, alteratives, astringents, emetics, narcotics, purgatives, diuretics, etc. In the discussion of the remedies under these designations the reader will find much interesting and valuable matter, much of which cannot be found elsewhere, which will enable him to solve many perplexing phenomena before inexplicable.

INFANT FEEDING AND INFANT FOODS. The Anniversary Address delivered before the New York State Medical Society, February 8, 1882. By Abraham Jacobi, M. D., President of the Society. 12mo. Pp. 24.

This small pamphlet contains a large amount of valuable information in regard to infant diet. Dr. Jacobi believes but little in the preparations of Liebig's substitute, Nestle's compound, and those of Loeffund, Gerber, etc.

Dr. Jacobi states that woman's milk contains more fat than an infant digests—that in its alvine evacuations fat and fatty acids are always to be found. While this is the case with human milk, cow's milk, which is used so much

as a substitute for it, contains still more fat. In feeding infants with cow's milk, we should, therefore, endeavor to diminish as much as possible the excess of fat. Dr. J., however, advises against the use of skim milk; for instead of being alkaline or neutral, it is acid, and acid milk is a danger which an infant must be protected from.

EDITORIAL.

THE MICROSCOPE IN CINCINNATI.—As late as ten or twelve years ago, while there were a few microscopes in Cincinnati, and a very few owned by physicians, there was but very little knowledge in regard to its use. We doubt very much if we would exaggerate, if we should assert that a majority of the physicians had not looked through one half a dozen times in their lives, while a good many had probably never seen through one a single time. We recollect of calling upon a physician of this city *less than ten years ago*, who had procured an English instrument, and with it a few mounted objects. He seemed to be under the impression that owning a microscope made him a microscopist, and he was generally regarded as one, for he got out his instrument with a great deal of flourish and proceeded to exhibit to us some objects. We perceived immediately that he could not exhibit the simplest object correctly, although he was well satisfied with his manipulations. Notwithstanding his lenses were adjustable, he was entirely unaware of it. In fact, he had never heard of correcting an objective, and we could scarcely make him believe that the collars on them were for that purpose. We asked for a resolution of the lines on the *p. angulatum*, but he assured us that only lenses of the highest magnifying power were capable of resolving them. When we, however, showed him his mistake by beautifully resolving them with one of his own objectives, having a power of only 200 diameters, he was amazed.

But to be brief: We are happy now to be able to say that the great ignorance which prevailed only a few years ago in Cincinnati in regard to the microscope, no longer exists. Instead of only half a dozen physicians having a microscope, there are a great many who own one—not a few having very fine ones—and the most of them, we have reason to believe, know how to use them. The various medical schools of the city afford regular instruction in

microscopy; while a few years ago such an instrument as a microscope was never seen in any of the colleges.

The causes which have brought the microscope into such high esteem are various. The advance in knowledge of pathology, physiology, and causes of disease have undoubtedly had an effect, although works have been issued for thirty years with plates exhibiting microscopic appearances of morbid growths, secretions, excretions, etc. We have drawings executed more than a quarter of a century ago, displaying very correctly the crystals in urinary deposits. In addition to the general advancement in knowledge, it has required that the attention of the profession be strongly attracted to the great benefit to be derived from the microscope in diagnosis, prognosis, and treatment of diseases, for it to become so generally utilized by the whole profession, when, so short a time since, it was so generally neglected. It is quite common, now, for many physicians impressed with the value of the instrument, who have not the time to make microscopic examinations, in case of their patients, of blood, pus, mucus, sputa, urinary deposits, etc., to employ an expert to make them for them. But, beside want of time, it is not reasonable that every competent physician, who is in active practice, can attain to sufficient skill in microscopic examination for him to possess the accuracy necessary to found a treatment upon the results. He is acquainted with the indications belonging to them, but he would rather an expert would disclose them.

We do not think that we are given to boasting or are disposed to take undue credit to ourself, in that we are impressed with the belief, along with many of our friends, that the MEDICAL NEWS deserves no little credit in drawing the attention of the profession hereabouts to the importance of the revelations of the microscope. It seems scarcely reasonable that it was a mere coincidence that, at the same time the MEDICAL NEWS began to advocate the value of the microscope in medicine, that at that time an interest began to be first manifested in it by the profession of the city and vicinity. We and the journal must certainly be regarded as pioneers in microscopy in this city. Other causes, of course, have operated to create an interest in this most valuable instrument in medicine, and it is our wish that they will continue to act, until no teacher in medicine will dare say, as a certain one said, who does not reside more than a hundred miles from Cin-

cinnati, and to whom we once before alluded, "that there is not much in it."

MEETING of the Jackson County Medical Society, at Brownstown, March 2, 1882. Dr. T. S. Galbraith, President, in the chair.

After the election of officers and delegates, the members reported on and discussed several interesting topics. The following officers were elected for the ensuing year: Dr. L. S. Oppenheimer, Seymour, President; Dr. G. O. Barnes, Cortland, Vice-President; Dr. L. M. Boas, Brownstown, 2d Vice-President; Dr. J. A. Stillwell, Brownstown, Secretary; Dr. N. N. Shipman, Seymour, Treasurer.

After reading his paper on "Repositing the Displaced Pregnant Uterus" (which appeared in the last number of *The Reporter*), Dr. Oppenheimer asked the opinion of the members regarding the subject of coitus during pregnancy, whether it was found to be injurious to the female or fruit. In the *American Practitioner* for July, 1881, Dr. Parvin, of Indianapolis, takes the ground that it violates nature's law, as observed in the lower animals, that, as a rule, it is painful and disgusting to the woman, that it aggravates the nausea and leucorrhea of the early months, and that probably half the cases of spontaneous abortion may be attributed to it. Although in a measure, this was all true, Dr. O. did not believe that it was absolutely necessary for the man to make a martyr of himself during the whole time of his wife's pregnancy. After the fourth month the uterus mounts, and, in fact, is out of the lower pelvis, and for a few months the doctor thought coitus could do no damage, if a trifle æstheticism were employed by the husband, who should remember the tender conditions under which this holy act was performed. At the same time, the doctor did not think the desires and acts of other mammalia could always be accepted as a guide for the human being. The rutting seasons, irregular habits of eating, and many other matters in zoophysiology differ so widely from the habits of the human, that no close analogy could be made in regard to coitus. In the main, he believed that Dr. Parvin's article was replete with instruction which equally interests the specialist and the general physician.

Dr. Bain, of Brownstown, considered the question one of great importance. It was a popular idea with the laity in his section, that when a woman becomes pregnant she

would inform the husband, who must thenceforth abstain from carnal gratification. This sign was almost considered a sure one of pregnancy. One young man, who had been married about six months, was asked by a friend whether his wife was in a delicate condition. He said that he could not tell, as she had not hinted about abstinence. Dr. Bain was inclined to think that intercourse was injurious during pregnancy. Dr. Shipman did not believe that this subject should be brought up at a meeting of this kind, but should be privately discussed.

Dr. Rodman, of Ewing, thought that this was the proper time and place for meeting these questions—that they were of vital importance to many a mother and child, and it was the duty of the physician to decide this very matter for them. Who else could do so if not the physician? He did not believe that the appetites and desires of the animals could be compared with those of the human; that they lived differently and had different habits in general. He believed, however, that intercourse should be restricted during pregnancy.

Dr. Oppenheimer reported several anomalous cases of vaccination. He vaccinated a girl of eight, from the same lot of bovine virus with which he had vaccinated others. Eight days after, a variolous eruption broke out all over the body, not very thickly, but with large umbilicated pustules, especially thick on the scalp, and accompanied by considerable fever. About two weeks afterward, he was called to see two more children of the same family, who had contracted the same disease by sleeping with the other. The children were all distinctly marked afterward wherever a pustule had been. All recovered without medicines. As an experiment, Dr. C. then vaccinated a young man, who was profusely pock-marked from a case of variola, that came very near killing him a number of years ago. The inoculation not only "took," but it "took bad." Patient was made very sick by it, but the eruption on the arm was not typical, there being no umbilication whatever. Dr. O. also mentioned a case of mild phthisis, which he vaccinated. The wound became phagedemic and very near destroyed the patient.

ANESTHETICS FROM A MEDICO-LEGAL POINT OF VIEW.—The following conclusions, presented by Dr. J. G. Johnson, of Brooklyn, are worthy of careful consideration, as they in-

volve questions that have an important bearing on the practical relations of patient and medical attendant:

Anesthetics do stimulate the sexual functions, the ano-genital region being the last to give up its sensitiveness. Charges made by females under the influence of an anesthetic should be received as the testimony of an insane person is. It can not be rejected, but the *corpus delicti aliunde* rule should be insisted on. Dentists or surgeons who do not protect themselves by having a third person present do not merit much sympathy.

Deaths from administration of chloroform after a felonious assault, unless the wounding were an unmistakably fatal one, reduces the crime of the prisoner from murder to a felonious assault.

The surgeon has no right to use chloroform to detect crime against the will of the prisoner.

But the army surgeon has the right to use chloroform to detect malingerers.

The medical expert, notwithstanding he is sent by order of court, has no right to administer an anesthetic against the wish of the plaintiff, in a personal damage-suit, to detect fraud.

Gross violations of the well-known rules of administering anesthetics, life being lost thereby, will subject the violator to a trial on the charge of manslaughter.

A surgeon allowing an untrained medical student to administer anesthetics, life being thereby lost, will subject the surgeon himself to a suit for damages. What he does through his agent he does himself.

The physician who administers an anesthetic should attend to that part of the business, and nothing else. He should have examined the heart and lungs beforehand. He should have the patient in the reclining position, with his clothes loose, so as not to interfere with respiration, should have his rat-tooth forceps, nitrite of amyl and ammonia, and know their uses, and when to use them, and how to perform artificial respiration.

In operations on the ano-genital region and the evulsion of the toe-nail, complete loss of sensation in these parts should never be allowed, and no operation on these parts at all should be had under an anesthetic, unless by the approval of a full consultation, who have a knowledge of the dangers.

Chloroform can not be administered by a person who is not an expert to a person who is asleep without waking

him. Experts themselves, with the utmost care, fail more often than they succeed in chloroforming adults in their sleep.—*Annals of Anat. and Surgery.*

AMERICAN MEDICAL ASSOCIATION.—The Association this year will meet at St. Paul, Minn., on Tuesday, Wednesday, Thursday, and Friday, June 6, 7, 8, 9, 1882, commencing on Tuesday at 11 A. M.

Every body should endeavor to go, as this meeting will, undoubtedly, be highly interesting. The best route from this city and from all points east of it, and south and south-east, will be over the Cincinnati, Indianapolis, St. Louis, and Chicago Railway, Mr. John Egan General Passenger and Ticket Agent. No doubt a reduction of rates will be made.

THE Shah of Persia lately underwent the operation of having a tooth extracted. In the mosque prayers were offered up for his safe passage through the ordeal, and he made his will and took an affectionate farewell of all his wives. Happily, however, he survived the operation, and his faithful subjects exhibited their thankfulness by sending him congratulatory offerings amounting to not less than three thousand ducats.—*South. Dent. Journal.*

CINCINNATI EXPOSITION.—We are happy to inform our readers that the usual Annual Exposition will be held in this city, commencing in September and continuing until October. The Expositions are always interesting to Scientific and professional gentlemen, in consequence of the large amount of scientific apparatus on exhibition in every department of science.

RESIGNATION.—We understand that the venerable Prof. S. D. Gross, who has been for so long a time Professor of Surgery in Jefferson Medical College, Philadelphia, has resigned his chair in that institution. The infirmities of age are, no doubt, the cause. We have not learned who will be appointed to fill the position.

THE "*Proceedings of the Tri-State Medical Society*," which were published in the April issue of the MEDICAL NEWS, should have been credited to the *St. Louis Medical and Surgical Journal*. We occasionally sin in not giving credit, but we are more sinned against in this respect.

I. M. HAYS.

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ORIGINAL CONTRIBUTIONS.

Consumptives in Florida.

BY L. R. PEET, YALAHUA, FLORIDA.

A GOOD deal has already been written on this topic, seemingly enough to exhaust it; but it is far from being exhausted. Florida is one of the large States, and the climate is by no means the same in every portion. Therefore a writer from one part, even if strictly *honest* in his statements, will give a very different impression from that given by a person living in another part. From this section I think but little has been written; hence what I state may have novelty about it, if nothing else.

I have lived here on the southern shore of Lake Harris four years; and having come here on account of weak lungs, my attention has been constantly called to pulmonary cases besides my own. My opinion concerning the climate is now probably fixed. I am also prepared to give reasons.

The popular notion that the winters here are favorable to consumptives is somewhat fallacious. As we are generally prepared only for mild weather, the patient is much more exposed to changes of temperature, of which we have many during December and January, than would be the case in the North. To be benefited by the climate, one must take it as a whole. It is too much the practice to come down here at the most unfavorable season, and return just as the most favorable has fairly developed itself. The time to come to this part of Florida is about the 1st of February; and the patient should not think of

returning in less than one year, and then only for a few weeks. Once here, and acclimated, one must make up his mind to reside here thenceforth. The whole system undergoes a change so radical that exposing it to the severity of Northern winters would probably in a majority of cases prove fatal. Fortunately, one has usually no desire to return. Life here is peculiarly pleasing. With a moderate income everything conducive to enjoyment is always procurable; and the subjective condition consequent upon physical improvement adds a good percentage of charm. During the process of acclimation there may be a good deal of bodily distress from chills, Florida sores and sore eyes; and the time consumed in getting used to it varies in length—from one year to four. The consumptive is, however, much less liable to indigenous afflictions. If he watches himself and promptly medicates, he may pass the probationary state with little to complain of. The staple plagues, under the name of fleas and mosquitoes, are here, as everywhere, in the summer; and owing to our numerous ponds, there may be more of the latter to the cubic inch than in the North. Yet at their thickest and hungriest, they are more laughed about than got long-faced over. Gauzing doors and windows, and barring beds, the mosquito raves unseen, and excites only a feeling of complacency in the human breast. The flea, of course, remains master of the situation while he is with us. His sojourn is, however, only a small portion of the year. I mention these things because it is a part of the impression given by many letter-writers that such insects do not exist here.

My reasons for preferring this part of the State for my lungs, and for recommending it to those similarly afflicted, are these: In the first place, we are here at the highest above sea-level. From the so-called Lake Region the general course of streams is northward and westward. In fact, our lakes, six in number, are but the beginnings of the Okleewa River, a tributary of the St. John's. These lakes are a very picturesque group. They average about twelve miles in length and five in width; depth in the middle, twenty to thirty feet. Lake Harris, upon the shores of which I live, is largely supplied from springs, the sources necessarily some distance away—it may be several hundred miles. The water is very pure. The surface of this region is somewhat peculiar as it regards

water. There are at least two strata of water. From five to fifteen feet down there is a constant oozing flow. Digging that depth, wells of inferior quality may be had. From twenty-five to fifty feet below the surface is another stratum, furnishing water of the very best quality—cool and delicious.

Our location being so high, we get the first and greatest benefit from any movement of the air; and there is an almost constant play of light breezes during the daytime. This motion of the air is curious. Not unfrequently little currents of wind seem to come from every point of the compass at once! More than one-fourth of the surface is water, in the shape of ponds, from half a mile by an eighth, to several miles in area, and from these we get much of the supply of moisture for our heavy dews, with their grateful coolness at night. The dews and breezes which characterize our climate and make the summers more delightful to the valetudinarian than any others in the world, are, it seems, not realizable to any who have not *lived* here. So carefully edited a sheet as the *New York Nation* not long ago stated that the summers all over Florida were "very trying." To the observant resident here, who has *lived* in the North, that announcement has a somewhat comical aspect. We rarely have any sultry weather at all. Throughout the summer months there are almost daily showers, coming generally in the afternoon, and in their passing leaving skies that, it is safe to say, are not equaled elsewhere on earth for gorgeous beauty. Our really attractive weather begins in February and continues till the middle of November. It is these ten months that the consumptive needs. If his disease has not already reached that stage where cure is impossible, he may be very confident that pulmonary disorder will not be the cause of his death. Probably half our population are here on account of their lungs; and a death from pulmonary complaint, except where the immigrant is already in a dying condition, is unknown here.

Taking the recent theory regarding consumption, viz: that only the *tendency* to it is inherited, and that decay of the lungs always begins at the apices and under scales of hardened mucus, the effect of this climate is easily explained. The air here is always moist; and owing to the constant motion of it, and to the saline property from bodies of salt water about fifty miles off either way, it is

very pure. This humidity of the air has, of course, the effect of softening the mucus in the lungs, and the freshness conduces to full inspirations. The mildness of the weather tempts one outdoors often, thus bringing to bear the soothing and healing influences. To how great extent the resin of the pines has curative qualities, or whether it has any at all, can not be known.

This article may be closed with a brief statement of a recent experience of my own.

Last summer I spent in New York city and in Baltimore. About the middle of September I was attacked with caseous pneumonia, and in the course of five weeks was so reduced that death seemed only a few days ahead. It was then determined that my only chance was in returning to Florida. I had barely strength enough for the journey. On the fourth day after my arrival my expectoration fell off about two-thirds. I have since (now five months) gradually recovered my strength. My lungs are still tender and some expectoration continues, but I have for a long time been quite out of danger, and am confident that I shall in a few more months be back in my normal state. So clear is my conviction that to this climate I owe my life that it is the incentive to writing the foregoing. I could give several instances nearly, or quite, as striking as mine, but they would add too little to the weight of influence to make it worth while to give them.

Yalaha, Fla., April 10, 1882.

Salicylic Acid in Rheumatism.

BY B. FRANK PRICE, M. D., LITTLE HOCKING, OHIO.

MR. EDITOR:—Having taken the MEDICAL NEWS for several years, I have come to look upon it as one of the indispensables in my library of medical literature. To the busy practitioner notes on practice from physicians in different localities many times serve to be of great value to reading physicians, especially so, as such observations are generally the results of a rich experience. For one I can say that I have frequently utilized suggestions in regard to treatment of diseases which I have met, as given by others through the MEDICAL NEWS, and with much satisfaction. It was in the MEDICAL NEWS that I got my first

knowledge of salicylic acid and its remedial effects in acute rheumatism. In combination with bicarbonate of soda I think it stands superior to any other agent to be found in the *Materia Medica* in acute rheumatism. My favorite way of giving it is in a formula of this kind:

R_x Acid. Salicylic, ʒiiss.
Sodæ Bi-Carb. ʒij. M.
Div. in Chartas, No. Xij.

Give one every three hours in simple elixir, until the severity of the symptoms is greatly lessened, then exhibit less frequently until all symptoms are relieved. I have never been disappointed in the good effects of salicylic acid in acute rheumatism when the remedy was rightly indicated. As to its efficacy in "chronic" rheumatism my experience has been very limited, having extended only to a case or so, and in these I do not know how much was due to its action, for other remedies were used in connection with the acid and soda treatment. I will give one of the cases referred to.

Mrs. P., aged 62, living on a farm, was attacked in the spring of 1870 with acute rheumatism; was treated by various physicians; made a slow recovery. In 1875, she began to experience rheumatic pains in knees, hips and arms, which steadily grew worse till 1877, when she became so lame that she was unable to walk. In this condition I found her September 10, 1880. After obtaining a full statement of her previous condition and informing myself in regard to the treatment to which she had been subjected by various medical attendants, and especially by some that I knew to be good physicians, I was at a loss to determine what treatment to institute in order to benefit her. Finally I concluded to try the salicylic acid and soda treatment, and gained permission to give it a thorough trial. A physician is generally quite fortunate if he can hold a patient suffering with rheumatism long enough to give his treatment a good trial. I commenced with the prescription described above, giving a dose every four hours for one week. At the expiration of that time the symptoms were better. I continued the powders, one, three times a day. At the end of five months my patient went to work, and has never had to stop one day on account of rheumatism or any other ailment. The additional treatment consisted in exhibiting for awhile in appropriate doses six ounces of Tinct. of Guaiac in

Syrup, with a few other medicines for acting upon the kidneys and bowels when indicated. I gave the medicine five months continuously.

Prevention and Restriction of Small-Pox.

DOCUMENT ISSUED BY THE MICHIGAN STATE BOARD OF HEALTH.

SMALL-POX A PREVENTABLE DISEASE.—It has long been known that small-pox can be prevented or modified by vaccination. It is now believed that a wide-spread epidemic of the disease can be attributed only to an equally wide-spread ignorance or willfulness concerning small-pox and its prevention by vaccination. No intelligent person need have small-pox.

WHY VACCINATE?—Because unmodified small-pox is so deadly a disease, and so often disfigures and entebles those who recover,* and because by traveling or by travelers, by articles received in the mail or from stores or shops, or in various other ways, any one, at any time, may, without knowing it, be exposed to small-pox, it becomes important, so far as possible, without injury to health, to render every person incapable of taking the disease. This may be done so perfectly by vaccination and revaccination with genuine bovine vaccine virus that no question of ordinary expense or trouble should be allowed for a day to prevent the careful vaccination of every man, woman and child in Michigan, and the revaccination of every one who has not been vaccinated within five years. It is well established that those who have been properly vaccinated are far less likely to take small-pox if exposed to it, and that the very few who have been properly vaccinated and have small-pox, have it in a much milder form, and are much less disfigured by it than those who have not been thus vaccinated. The value of vaccination is illustrated by the following facts:

On March 13, 1859, Dr. E. M. Snow, of Providence, R. I., found, in a cluster of seven houses, twenty-five famil-

* "Among those who outlive it, many either totally or partially lose their sight or hearing; many are left consumptive, weakly, sickly, or maimed; many are disfigured for life by horrid scars, and become shocking objects to those who approach them. Immense numbers lose their eyesight by it."
—*La Condamine*.

ies, and in these families ten cases of small-pox, all apparently at about the same stage of the disease. In the same families there were twenty-one children who had never been vaccinated. The ten cases and the remaining members of the families, including the twenty-one children, were quarantined at home, and the children were all vaccinated and compelled to remain with the sick. Several other cases of small-pox occurred in persons previously exposed, but not one of the twenty-one children referred to had the slightest touch of the disease.

In Sweden the average number of deaths in each year from small-pox per one million inhabitants was—

Before the introduction of vaccination (1774–1801), 1,973.

During the period of optional vaccination (1802–1816), 479 ;

And during the period of obligatory vaccination (1817–1877), 189.

Vaccination was introduced in England near the beginning of the present century, and since 1853 compulsory vaccination has been attempted. In England the number of deaths in each year from small-pox per one million inhabitants was—

At the close of the last century, 3,000 ;

From 1841 to 1853 (average), 304 ;

From 1854 to 1863 (average), 171.

In the Bavarian army revaccination has been compulsory since 1843. From that date till 1857, not even a single case of unmodified small-pox occurred, not a single death from small-pox.

During 42 years of duty, Dr. Marson, physician of the London small-pox hospital, has never observed a single case of small-pox in the officers and employes of the hospital, who are revaccinated when they enter the service, and who are constantly exposed to the infection.

“Out of more than 10,000 children vaccinated at Brussels with animal lymph, from 1865 to 1870, and who went through the terrible epidemic of small-pox which in 1870 and 1871 frightened the world, not a single one was, to my knowledge, reported as being attacked by the disease. The same immunity was shared by those—a much larger number—whom I had revaccinated, and who at the same time were living in epidemic centers.”—*Dr. Warlemont,*

of Brussels.—[*North Carolina Medical Journal*, January, 1880, Vol. V., p. 2.]

WHO SHOULD BE VACCINATED?—Everybody, old and young, for his own interest, and that he may not become a breeding-place for the distribution of small-pox to others, should seek that protection from small-pox which is afforded by vaccination alone. It is believed that all persons except those mentioned in the following paragraph may, if the operation is properly performed, at the proper time, and with pure bovine virus, be vaccinated with perfect safety to themselves. Even those who have had small-pox should be vaccinated, for otherwise they may take the disease; and it seems to be proved that a larger proportion of those who have small-pox the second time die than of those who have the disease after vaccination.

WHO SHOULD NOT BE VACCINATED?—Unless exposure to small-pox is believed to have taken place, or likely to take place, teething children, pregnant women, persons suffering with measles, scarlet fever, erysipelas, or susceptible to and recently exposed to one of these diseases, persons suffering with skin disease or eruption, and, in general, feeble persons not in good health, should not be vaccinated. In all cases in which there is any doubt as to the propriety of vaccinating or postponing vaccination, the judgment of a good physician should be taken. The restriction as to vaccinating teething children makes it important that children should be vaccinated before the teething process has begun, because small-pox is very much more dangerous than vaccination. Small-pox is exceedingly dangerous to pregnant women.

WHEN SHOULD A PERSON BE VACCINATED?—The sooner the better, as a rule, and especially whenever there is much liability of exposure to small-pox. Children should be vaccinated before they are four months old; those who have never been vaccinated should, with the exceptions previously made, be vaccinated at once. Because the vaccination often loses its protective power after a time, those who have been vaccinated but once or twice should, in order to test and to increase the protective power of the former vaccination, be vaccinated again and as often as the vaccination can be made to work. For the first three or four scars the protection afforded is believed to be somewhat in proportion to the number of good scars,

conditional always that the scars be the result of a proper vaccination with genuine vaccine virus. In general, to insure full protection from small-pox one should be vaccinated as often as every five years. It has been found that of those who have small-pox, the proportion of deaths is very much less among those who have three or four good vaccination scars than among those who have but one scar.

Vaccination as late as the second day after known exposure to small-pox, has prevented the small-pox; vaccination the third day after exposure has been known to render the disease much milder than usual, and, in a recent case in Iowa, vaccination on the seventh or eighth day after exposure to small-pox ran a partial course, and was believed to have modified the attack of small-pox, which, however, it did not wholly prevent.

WITH WHAT SHOULD ONE BE VACCINATED?—Virus taken from the arm of one vaccinated a second time is worthless, because unreliable. Virus dissolved and carried about between glass slips in the pocket of the vaccinator is liable to contamination and fermentation; bovine virus dried on ivory or quill points is preferable. It should be remembered that a vaccination which does not produce a vaccine vesicle, while it affords little or no lasting protection against small-pox, may prevent subsequent vaccinations from working well and becoming protective. For this reason it is important to use only virus from reliable sources and free from contamination or decomposition. In a majority of cases, if the virus be taken at the proper time (eighth day after vaccination) from the arm of a healthy child having no taint of a hereditary or communicable disease, such as scrofula, consumption, syphilis, erysipelas, scarlet fever, etc., and undergoing the action of its first vaccination, and if a properly cleaned lancet be used, no harm will result to the person vaccinated, and a good vaccination may be secured. This method involves rupturing the vesicle on the arm of the child from whom the virus is obtained, and this is objectionable because it may interfere with the complete development of its vaccination. But because harm has sometimes resulted from the use of virus taken from another person, because it is often impossible to tell whether a child has pure blood and is free from every disease, because it is so easy to obtain pure and fresh bovine virus, and because

such bovine virus is efficient, it is better in all cases to use only the pure and fresh bovine virus.

Reasons for preferring bovine virus to humanized virus may be given as follows: (1) By the use of bovine virus there is secured a more perfect or typical development of the vaccine disease; and hence it may fairly be inferred a greater protection against small-pox. (2) With the bovine virus, and with a clean lancet, and with clean surroundings, there is no danger of communicating syphilis. (3) The bovine virus is far more effective than the humanized virus in revaccination; and where the humanized virus fails, and the bovine virus works, it is probable that there was susceptibility to small-pox which the humanized virus did not remove, but which has been removed by the bovine virus. (4) Greater care can be taken in the propagation of bovine virus, a greater supply can be always at command, and always, but especially in times of urgent danger from small-pox, people can have a better guarantee that they are vaccinated with genuine and pure vaccine virus.

BY WHOM SHOULD ONE BE VACCINATED?—The operation of vaccination should be performed always by a competent and responsible physician, or by some one whom he has instructed and recommends to perform the operation. To try to vaccinate one's self, or one's family, is poor economy, for it often results not only in a waste of money and of time, but in a false and dangerous feeling of security. To trust to vaccination by nurses and midwives is equally foolish. A well-educated and experienced physician has the skill and the special knowledge necessary to the best judgment on all of the questions involved, without which the operation may be a failure or worse than a failure. In work of this kind, the best is the cheapest, whatever it costs.

WHERE SHOULD VACCINATION BE PERFORMED?—In a room or place free from persons suffering from disease, and from dust or vapors, which may convey to the scratched surface germs of any communicable disease; certainly not in or near a room where there is erysipelas, nor in the presence of one who has just come from a person sick with erysipelas, diphtheria, or scarlet fever.

HOW TO VACCINATE.—In remote places it is sometimes necessary to vaccinate persons who are practically beyond the reach of a competent physician. For the bene-

fit of such, and not as an encouragement to others to dispense with the services of a skillful physician, the following suggestions are made as to the best method of vaccinating: As a rule, the most convenient place for vaccination is found to be on the outer surface of the left arm, about one-half or two-thirds the way up from the elbow to the shoulder. An infant which its mother carries on her right arm should be vaccinated on its right arm, in order to avoid rupturing the vesicle by pressure against its mother. With a sharp-pointed and perfectly clean instrument (lancet) make six parallel scratches, barely sufficient to make a show of blood, but not to cause bleeding. Directly across these scratches make four or five similar scratches, so that the scarified place shall be as large as a split pea, and something like this illustration: If blood flows, wait, and wipe it off before applying the lymph. The virus is at and near the pointed end of the ivory carrier. Moisten the lymph upon the ivory point with half a drop of pure cool water smeared over it with the lancet. Then *rub the point over the scarified surface briskly for a minute so as to lodge the granules in the abraded surface*. The lymph, which may be deposited on the sound skin, should be scraped upon the scarified place and allowed to dry there. When the arm is dry, return the ordinary clothing, between which and the arm a loose, soft cloth may be fastened. Do not put on a tight bandage or any plaster. Let no saliva touch the scratched place, neither affix a plaster in any way. When an ivory point has been used, throw it into the fire. Except there is urgent necessity, do not use the same point on two persons, and not then if there is danger of communicating disease. Vaccination sometimes fails because the arm is not well scarified and the virus is not thoroughly rubbed into the scarified surface. A skillful vaccinator can generally use sufficient care to insure success in a susceptible person. Never cut entirely through the skin. Virus should not be inserted under the skin. Except with young children, and with feeble persons, for whom only one place is recommended, two or more places an inch or more apart may be scarified and vaccinated.

AFTER VACCINATION.—Let the vaccinated place alone. Do not scratch it or otherwise transfer the virus where it is not wanted.

COMMON APPEARANCES AFTER VACCINATION.—For a day or two nothing unusual should appear. A few days after that, if it succeeds regularly, the skin will become red, then a pimple will form, and on the pimple a little vesicle or blister, which may be plainly seen on the fifth or sixth day. On the eighth day the blister (vesicle) is, or should be, plump, round, translucent, pearly white, with a clearly marked edge, and a depression in the center; the skin around it for about half an inch is red and swollen. This vesicle and the red inflamed *circle* about it (called the areola) are the two points which prove the vaccination to be successful. A rash, and even a vesicular eruption, sometimes comes on the child's body about the eighth day, and lasts about a week; he may be feverish, or may remain quite well. The arm may be red and swollen down as far as the elbow, and in an adult there will usually be a tender or swollen gland in the armpit, and some disturbance of sleep for several nights. The vesicle dries up in a few days more, and a crust forms, which becomes of a brownish, mahogany color, and falls off from the twentieth to the twenty-fifth day. In some cases the several appearances described above may be delayed a day or two. The crust or scab will leave a well-marked, permanent scar.

SIGNS OF SUCCESSFUL REVACCINATION.—When a person who has been once successfully vaccinated is afterwards re-vaccinated there sometimes results a vesicle which, as regards its course and that of the attendant areola, can not be distinguished from the perfect results of a primary vaccination, and this is more likely to occur if bovine virus is used. But often the result is modified by the influence of the previous vaccination, no true vesicle forms, but merely a papular elevation surrounded by an areola; and this result having attained its maximum on or before the fifth day, afterwards quickly declines. Or, if a vesicle forms, its shape is apt to vary from that of the regular vesicle, and its course to be more rapid, so that its maturity is reached on or before the sixth day, its areola declines on or before the eighth day, and the scabbing begins correspondingly early. In either case the areola tends to diffuse itself more widely and less regularly, and with more affection of the areolar tissue, than in primary vaccination, while the itching and the feverishness may be present much the same as in primary vaccination.

When the results of a revaccination are not well marked, protection should not be presumed unless the same virus is proved to be efficient in a primary vaccination.

WHAT TO DO DURING AND AFTER VACCINATION. — Do nothing to irritate the eruption; do not pull the scab off; when it drops off throw it in the fire. When the eruption is at its height, show it to the doctor who performed the vaccination. If it is satisfactory, ask him for a certificate stating when and by whom you were vaccinated, whether with bovine or humanized lymph, in how many places, and with what result at each place. When the arm is healed, if the vaccination did not work *well*, *be vaccinated again, and as soon as possible*, and in the best manner possible. This will be a test of the protection secured by the former vaccination, and will itself afford increased protection. Do not be satisfied with less than four genuine vaccine scars, or with four if it is possible to secure more than four. This vaccination a second or third time in close succession is believed to be hardly less important than vaccination the first time, and hardly less valuable as a protection against small-pox. Without doubt many persons are living in a false sense of security from small-pox because at sometime in their lives they have had a little sore on their arms caused by a supposed or a real vaccination, or because an imperfect vaccination failed to "work," or because they were successfully vaccinated, or had the varioloid, or the unmodified small-pox many years ago. Until small-pox is stamped out throughout the world, so that exposure to the disease shall be practically impossible, the only personal safety is in such perfect and frequent vaccination that one need not fear an exposure to small-pox through the recklessness of the foolish. Statistics abundantly prove that among the unvaccinated, small-pox has lost none of the deadly power which made it such a terror to former generations.

MAKE A RECORD OF YOUR VACCINATION. — Do not fail to procure and preserve the certificate mentioned in the preceding paragraph, and also to make a personal record of the facts with regard to any vaccination of yourself or in your family. From it you may sometimes learn that it is ten years since you or some member of your family was vaccinated, when you thought it only five.

VACCINATION BEFORE ADMISSION TO THE SCHOOLS. — In some

places, and with good results, the Board of Education has made the possession of a certificate signed by some competent physician, stating that the child has been successfully vaccinated within a given number of years or months, a condition to admission to the public schools. Such a regulation seems to be one of the most efficient means of securing a general vaccination of the young people.

CORPORATIONS AND LARGE BUSINESS FIRMS may well prevent interruption of their business by small-pox by requiring employes to exhibit certificates of successful vaccination, and of revaccination.

DO NOT DELAY TO BE VACCINATED.—By setting about it at once there will be time to secure pure and fresh vaccine virus, and neither sickness nor haste need prevent a successful vaccination. But if one puts it off, he may suddenly be called away on an unexpected journey, in which he may incur greater risk of exposure to small-pox, or small-pox may appear in his vicinity, and for want of time to procure reliable vaccine virus, he may be compelled to accept vaccination with virus neither fresh and active, nor of known purity; and vaccination with inferior virus, while it affords but little protection against small-pox, may be a hindrance to successful vaccination with the best virus; or, by his delay, he may contract small-pox itself, with all its dangers, and with an expense many times larger than the cost of thorough vaccination.

SMALL-POX occurs at all seasons of the year, but as a rule is most prevalent in cold weather. It has been suggested that this may be in part due to a lack of ventilation in winter, by which the poison becomes more concentrated, and to the greater irritation and rawness of the throat and air-passages caused by the cold, dry air, and by the more abundant ozone in winter, the sore throat supplying a place where small-pox may easily be inoculated; it is known also that in a warm, moist air vaccine virus decomposes more readily than in a cold, dry air, and the same is probably true of small-pox virus. This greater liability to small-pox in winter makes it important that one should not wait till winter and its dangers have come before being vaccinated, and also that he should not suffer the winter to pass without being vaccinated.

SMALL-POX NOT SPONTANEOUSLY GENERATED—It is believed that neither small-pox nor any other strictly contagious

disease is originated in Michigan, and that small-pox may in a great measure be kept out of the State if proper measures are taken, such as the systematic inspection of immigrants and travelers and the isolation and disinfection of all infected material.

PREMISES.—Privies, cesspools, water-closets, drains, gutters, and all other such places liable to receive the contagion of a disease, should be frequently and liberally treated with the copperas solution mentioned in a preceding paragraph.

RAGS.—No person should handle old clothing or rags without taking precautions to prevent the spread of communicable diseases. Children should not be allowed to go near a rag-gatherer's collection, nor into the rag-rooms in paper-mills or store-houses.

SELECTIONS.

New Operation for Closing the Vulva in Incurable Cases of Vesico-Vaginal Fistula.

BY C. S. MUSCROFT, M. D.,
Surgeon to St. Mary's Hospital, Cincinnati, O.

A Paper read before the Cincinnati Academy of Medicine, March 27, 1882.

J. R., a primipara, aged twenty-three years, after a severe labor and suffering, December 12th, 1879, was delivered at the end of three days of a dead child. The pressure of the head caused great sloughing of the external organs of generation and the walls of the urinary bladder, resulting in vesico-vaginal fistula and separation of the urethra from the bladder.

She was admitted into St. Mary's Hospital, July, 1880, in a broken down condition of health; on examination the vagina was found so much contracted it was with difficulty the index finger could be introduced, the buttocks and thighs were excoriated from the constant dribbling of urine, with the usual fetor exhaled from its decomposition. The orifice of the vagina was so small that a satisfactory exploration could not be made with the speculum.

Treatment was adopted for the improvement of the

general health, and bougies introduced to overcome the contraction. This was continued to the first of September, when she was attacked with typhoid fever, from which it took her four months to recover. During this period the dilatation was abandoned, but was again renewed and continued until July 2d, 1881, without accomplishing the desired effect, except to a small extent. At this time an attempt was made to attach the remaining portion of the urethra to the bladder, but as was expected, the operation failed and the urethra sloughed away. The operation was tedious and difficult on account of the very small aperture of the ostium vaginæ.

Deeming it impossible to repair the rent in the bladder, and knowing of no plan by which the urethra could be restored, it was decided to close the vulva.

All the features of the operation and its results having been fully explained to the patient, she insisted upon its performance, saying she was anxious to have anything done which promised to relieve her from her horrible torture.

The operation for this purpose was made October 25th, 1881. The contraction of the vagina still remained, the posterior wall was denuded of its mucous lining and in an ulcerated condition. Being convinced the mode of operating by cutting away the horse-shoe shaped portion of the labia and posterior part of the vagina would not answer in this instance, for the reason that the latter had been already destroyed at the time of parturition, I therefore decided to leave the orifice for the exit of the urine at the posterior commissure of the vulva, believing the artificial methods of applying either urinals, compresses or sponges could be better accomplished in this situation than if the opening had been left to correspond to the natural orifice of the urethra.

Chloroform having been administered by Dr. W. H. Wenning, the operation was performed in the presence of Prof. W. H. Taylor, of the Miami Medical College, Drs. J. C. McMechan and C. S. Muscroft, jr., members of the hospital staff, all of whom kindly assisted. The mucous lining, commencing at the sound tissue on the left side of the vulva, was freely removed and the incision carried forward to the anterior commissure including the labium minor and clitoris, both of which were freely removed, then carried backward on the opposite side, cutting away

the other internal labium and mucous lining corresponding to the beginning. No serious hemorrhage occurred during the operation. Five sutures of polished annealed steel wire were used, being stronger than iron wire; the thighs were bound together and a solution of sulphate of iron, 5ss to the pint of water, applied externally by compresses and the same injected into the vaginal and pelvic cavity. Very little surgical fever followed, and the case progressed favorably until the parts were healed. The sutures, with the exception of the one nearest the outlet, were allowed to ulcerate away.

After removing the last suture the urine dribbled away constantly. To prevent this the intention was to apply some new expedient. I thought a wire could be passed around the outlet in such a manner as to close it at will, or a tube constructed that would remain in the cavity, around the sides of which the urine could not pass, and that a plug or other invention be made by which the urine might be drawn off at the desire of the patient.

While waiting for the parts to assume a better condition for further operation, the patient found she had some voluntary control for a short period of time, and the outlet was getting smaller. It was not long before she could retain the urine for an hour, and the voluntary control increased to such an extent that she could retain it for two hours. This condition existed for nearly a month before she was discharged, at which time she said the control over the part was improving.

Undoubtedly, this operation is unique for closing the vulva, for the relief of otherwise incurable cases of vesico-vaginal fistula. It has (so far as can be learned), been followed by a more complete success than the former mode, where the opening of the exit of the urine corresponded to the situation of the natural outlet.

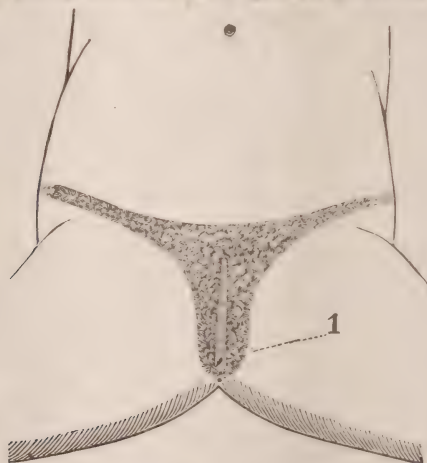
This was a very unfavorable case for even this operation, on account of the great destruction which occurred after parturition. Had the posterior wall of the vagina been in a normal state there would have undoubtedly remained a still greater voluntary power over the parts, and an artificial urethra could have been formed of any capacity to suit the views of the operator.

The patient suffers no more inconvenience during menstruation than at other times.

The question may arise, why the clitoris was removed?

The reasons were two, the first is the operation would be neater and more likely to succeed, and the other that it might have a tendency to repress the venereal desire, an object of serious consideration in all young women who may be compelled to submit to such an ordeal.

When this patient first came under my care she was in a miserable condition, broken down in body and mind, appeared aged far beyond her years, an object of disgust to others and loathsome to herself, entirely unfit for the pleasant association of relatives or friends, and the picture of utter despair. When she left the hospital for her country home she was a cheerful, healthy, happy and blooming looking young woman, in the enjoyment of all the privileges of ordinary social association, with power to retain her urine as long as many persons in ordinary health. The ulceration and excoriation of the buttocks and thighs had entirely disappeared, nor was the slightest odor of urine about her person, or moisture about her clothing. She said the amount of urine passed was at times half a pint, but that the quantity differed.



1. URETHRAL ORIFICE.

The accompanying cut is a good representation of the parts operated upon on the day she left the hospital. Before her departure many of the leading members of the profession were invited to see the case; the names of those who did so were: Professors W. H. Taylor, Byron Stanton, W. H. Mussey, of the Miami Medical College;

J. W. Underhill, of the Cincinnati Medical College; C. D. Palmer, of the Medical College of Ohio; Dr. J. C. Culbertson, Editor of the *Lancet and Clinic*; Drs. J. H. Tate, Theo. Sittel, G. S. Mitchell, E. W. Walker, A. S. Dandridge, and Clara M. Ellsbury, M. D., none of whom had any knowledge of the operation ever having been previously proposed or performed.

In what way can the voluntary power to retain the urine in this case be explained? My own belief is that it is chiefly due to the contraction of the constrictor muscles of the vagina, in which view I am endorsed by others who have seen the case; others attribute the result to the sphincters of the anus, and others again give the credit to both sets of muscles.

DISCUSSION.

Dr. Ransohoff inquired whether the husband of the patient was alive?

Dr. Muscroft replied that if the gentleman would show the relevancy of this question to the subject he would answer it; in the speaker's estimation this circumstance did not affect the propriety of performing the operation.

Dr. Whittaker rejoined that this question was of due importance and ought to be answered. Before resorting to so radical and gross an operation careful investigation ought to be made whether no other operation to attain the desired result was possible. Such means ought to be tried first, as it is equivalent to unsexing the individual to entirely close the vagina. If no other operation was possible or if it was necessary for the life of the individual it might have been justifiable, otherwise other means ought to have been tried first. Americans are justly proud of their achievements in gynecology, but this operation surpassed the limits of conservative surgery. The question proposed by the previous speaker was perfectly relevant. The structure of our modern civilization rests in a large degree upon the relations of sex. This patient might not be so well satisfied later with the results of this operation.

Dr. Buckner recalled a similar operation performed by the late Prof. Blackman at the Cincinnati Hospital. Although this surgeon had closed the vulva in a patient similarly affected several times, the result was a failure because the woman herself repeatedly tore open the vaginal orifice.

Dr. Muscroft said that he was utterly astonished at some of the criticisms made against a recognized and an established operation. When vesico-vaginal fistula is incurable it is *always* justifiable to close the vulvar opening. It is unfortunate that the patient is young and unmarried; for as the question of the sanction of her husband had just been put he would answer that she was not married. All the conditions were explained to her beforehand and she immediately gave her consent to the operation, preferring a life of comfort hereafter to the gratification of sexual indulgence. He did not bring up the subject in order to discuss the propriety of performing the operation but to elicit a discussion on its new form.

Dr. Thad. A. Reamy said that he had also been courteously invited by Dr. Muscroft to see this case, but found it impossible to do so owing to other engagements. From the description given by the reporter of the case he thought the responsible party in the first place was the accoucher, probably a midwife, who must have been guilty either of ignorance or gross neglect. Laceration of the perineum may sometimes be unavoidable, in rare instances the bladder may be subjected to such pressure as to result, after sloughing, in vesical fistula, but he could not conceive of conditions, sloughing of the perineum, much of the vagina, part of the bladder, as following a properly conducted labor. If there was such disproportion between the head and outlet as to make this amount of delay necessary, then the labor should have been terminated by forceps or Cæsarean section, or, if the child was dead, by craniotomy.

The damage having been done, however, he must now criticise the first steps in Dr. Muscroft's management of the case. He has stated that the vagina was so closed by bands of cicatricial tissue when the case came under his charge and he commenced treatment preparatory to operation for cure of the vesico-vaginal fistula, that he found it difficult to introduce the index finger far enough to touch the os uteri; that for many weeks he sought to dilate the vagina to overcome this cicatricial contraction by bougies, etc.; that, failing in this, he was at last compelled to operate through the narrow vaginal opening, thus (seriously embarrassing the operation; and, in the speaker's opinion) defeating the good results which so

skillful an operator as Dr. Muscroft would otherwise have secured. For it must be remembered that the cicatricial narrowing of the vagina not only prevented room for manipulation and free access to the fistulous borders, but likewise prevented the dragging of the uterus forward and with it the bladder so as to allow approximation of the same to the base of the urethra so as to prevent the latter structure from being much upon the stretch after the sutures were inserted, conditions absolutely necessary to success. The speaker must attribute the sloughing of the urethra which followed this first operation for cure to the causes above indicated. In his opinion if the operator had freely incised the cicatricial bands in all directions, freely dilated the vagina, and kept it dilated, by a large glass or hard rubber vaginal plug until healing was complete, the result would have been different. It is well known that cicatricial tissue will not stretch—it must be cut. The speaker thought that Dr. Muscroft must be mistaken as to the extent of vaginal sloughing, especially posteriorly, since the amount of cicatricial tissue described as existing, as well as the amount and location of tissues concerned in the ultimate operation, would sustain this doubt.

When the urethra is destroyed its restoration is extremely difficult; it has been done in a few instances. The speaker had himself succeeded in one case in obtaining a good result. He had dissected tissue down from either side, turned it over backward and adhered the edges, so as to secure a very good meatus and a portion of urethra. In this case the base of the urethra had not been entirely destroyed. In another case he had made an opening through the tissue about the sub-pubic ligament, and then dissected down so as to strengthen the lower wall, obtaining an opening through which the urine passed, but the sphincter power was not perfect.

Emmett had succeeded by similar methods in several cases. Dr. R. would frankly confess, however, that he had encountered failure in his attempts to restore a urethra oftener than success. In the two cases of success, he had been compelled to make in one instance three operations, in the other four. Dr. Muscroft's patient being a comparatively young woman, every device which gynecological surgery could possibly furnish offering prospects of success, should have been resorted to, before the final de-

cision to close the vagina, for it cannot be denied that this procedure is a matter of serious import.

Nevertheless, it is not so serious as leaving the woman utterly unable to retain her urine. In this condition she is an object of pity, which no words can describe, loathsome to herself and disgusting to those about her. If closing of the vagina can effectually free her from this state and enable her to retain the urine for several hours, and then control its discharge with the facility reported in this case, here is a final answer to any criticism of the operation itself. Both the patient and the surgeon are to be congratulated in the warmest terms; she for the inexpressible relief vouchsafed to her, he for the genius of conceiving and skill in executing an operation bringing such extraordinary results. That the results in this case are not exaggerated no one will question. The very manner and methods of the report show straightforward truthfulness in all its statements.

The speaker doubted very much whether the power by which the urine is retained is truly sphincter power for anatomical reasons which he would in a moment assign. But if this power to retain continues, this is neither here nor there; success is an end to criticism and a warrant for commendation which for his own part he would most cheerfully and enthusiastically express.

He thought it quite possible that since the orifice left by Dr. Muscroft is very far back, just in front of the anus, and since the tissue through which it passes must be of very considerable thickness, the retentive power may be due rather to valvular than sphincter action. It is quite probable that the closed vulvar walls and the anterior portion of the vagina constitute a considerable pouch in which the urine may accumulate for one or two hours, especially when the woman is in the erect posture, before it arises to the level of this orifice. The escape then being effected by the water line and pressure owing partly to a change of position. The diagram exhibited as well as the text in the report make it appear as above stated that the exit of the orifice is just in front of the anterior margin of the anus in the posterior border of the perineal body.

So far as external muscular structure is concerned, this would be at the junction of the external anal sphincter and the transverse perineal muscles. The action of these

two latter muscles arising as they do from the ischial rami and from the anterior aponeurosis of the perineal septum, must be antagonistic, having a tendency therefore to separate the walls of the artificial opening here described, rather than exert any sphincter power. The bulbo-cavernosus muscle, however, being more powerful and acting as vaginal sphincter, might slightly favor contraction. Indeed it would, but it is rather far removed in its ascent to either side of this new orifice to secure such a result very effectually. Moreover, in the extensive sloughing which is described by the operator, this muscle must have been to a great extent destroyed, especially at the lower portion near the perineal body at its origin. The pubococygeal, still more powerful in its action, could yet hardly act as a sphincter at this point, being rather high up. But it might be after all that new sphincter power is developed under stimulation of physiological necessity. The anal sphincter is behind the orifice.

It was mentioned that the clitoris was removed for two reasons: first, in order to insure a neater operation; and, secondly, to remove the sexual desire. The first reason given is beyond criticism, and the second would be if it were true that removal of the clitoris will take away the sexual desire; but it is now believed that this property does not reside in the clitoris, but in the lumbar cord. However, it is good to take away this gland in order to lessen the chances of masturbation. The reporter of the case said that unfortunately the patient was unmarried; he, the speaker, considered this most fortunate.—*Lancet and Clinic*.

· Luxation of Femur; Reduction After Five Weeks

BY H. R. WHARTON, M. D.,

Surgeon to Children's Hospital, Philadelphia.

HENRY P., æt. forty-six years, was admitted to the University Hospital on August 28, 1879, with the following history: Five weeks previous to his admission, he had fallen from the overhead of a barn to the floor, a distance of twenty or twenty-five feet, and had received an injury of the left limb. When first seen the nature of the injury was not recognized, but two weeks later a dislocation of

the hip was discovered, and three different attempts were made for its reduction, without success.

Upon examination of the patient the left limb was found fixed, adducted, and shortened to the amount of one and a half inches, a corresponding change was also found in the position of the trochanter on the injured side.

From the symptoms presented, it was supposed to be a dislocation of the head of the femur backwards on the ischiatic notch (or dorsal below the tendon of the obturator internus, Bigelow).

The patient being etherized, the thigh was flexed on the pelvis, and rotary motions were made to break up adhesions; when sufficient motion had been obtained, the usual manipulations for the reduction of dorsal dislocations were practised, but without avail, although the head of the bone changed its position slightly.

After several attempts had been made to effect reduction by manipulation, extension was made by means of a compound pulley attached to the thigh, counter-extension and fixation of the pelvis being employed at the same time; these attempts also proved unsuccessful.

Prof. Ashhurst, who saw the case with me, now suggested that the angular extension described by Bigelow be tried; accordingly, a band was placed around the thigh, and to this was attached the hook of a compound pulley suspended over the patient by a tripod; the pelvis was firmly fixed, and extension was made in this direction for several minutes, then suddenly let up, and the limb abducted and rolled inwards; at this point the head of the bone was found to have changed its position and the luxation to have been converted into one of the thyroid variety; this was attested by measurements. Manipulations were now made to effect the reduction of this dislocation, which converted it again into a dorsal dislocation; after several more attempts at reduction, during which the head of the bone changed its position from one point to the other, it assumed its place in the acetabulum, and by measurement the shortening was found to have disappeared.

After reduction the trochanter on the affected side was found to be much more prominent than that on the sound side, probably due to the filling up of the acetabulum.

Broad straps of adhesive plaster were then placed over the trochanter and around the pelvis. An extension ap-

paratus was applied, to which a weight was attached, and lateral support was given to the limb by sand-bags.

The patient complained of severe pain in the hip for several days, but this gradually wore away, and he was discharged from the hospital seven weeks after his admission, walking with the aid of a cane.

The reduction of old luxations of the femur is a proceeding attended not only with difficulty, but, in many cases, with danger, depending upon the position of the displaced bone, the time it has been out of place, the change that may have taken place in the acetabulum, and the amount of the adhesions that have occurred between the bone and the surrounding parts.

The time within which these luxations are reducible has been set down by Cooper at eight weeks; but the latter authority himself cites a case of dorsal luxation said to have been reduced after the lapse of five years, by a fall from a berth on shipboard, and Agnew mentioned twenty-nine recorded cases in which old luxations of the hip were reduced at periods varying from a few months to five years. Bigelow, in discussing this subject, says: "That much depends upon the condition of the acetabulum and head of the bone, and as long as the socket was still excavated and the bones were not deformed by osseous growths, I should feel quite confident of breaking up any adhesions, lacerating the newly formed capsule, and replacing the bone by the great power of the femoral shaft as a lever and of the flexed leg in rotating the head of the bone around the main ligament.

Old ischiatic or obturator luxations are generally conceded to be much less amenable to treatment than those of the iliac or pubic variety; Malgaigne assigns a period of two years or more for the reduction of a dorsal luxation, and only fifteen days for that upon the ischiatic notch. But it must be remembered that conditions may exist which will render any of these forms of luxation irreducible at a comparatively early period.

The amount of adhesions between the head of the bone and the surrounding parts is another element affecting the prognosis, and bears some relation to the injury done to the soft parts at the time of the production of the luxation.

In this connection should be mentioned the changes which occur in the acetabulum in old luxations, rendering

it shallow either by absorption of its edges or by the filling up of the cavity by fibrinous or bony material, and the osseous growths that may originate from the pelvis or the displaced bone, any or all of which may offer a serious obstacle to manipulation, and render a complete reduction impossible.

Among the accidents which may follow the attempts at reduction of old luxations, is the rupture of extensive adhesions, which may be followed by the laceration of blood-vessels, the formation of abscess, and injury to the sciatic nerve. Mr. Hutchinson mentions a case in which the latter complication occurred, and which was followed by paralysis of the limb.

Another accident which has frequently happened is fracture of the neck of the femur, which seems to have undergone fatty degeneration or atrophy from long disuse; it has occurred in the hands of the most skillful surgeons, and does not constitute as serious a complication as might be supposed, as it is generally followed by the production of a false joint at the seat of fracture, and leaves the patient with a useful limb.

The fact is not to be overlooked that in certain unreduced luxations of the hip, the head [of the bone has formed for itself a new articular cavity, which permits of a certain amount of motion, and gives the patient a fairly useful limb; the probabilities of this occurrence are said to be greater in the ischiatic luxation than in the other varieties.

In irreducible luxations, where the pressure of the head of the bone causes pain, or where the deformity interferes with the patient's locomotion, much may be done to remedy this and give the patient a useful limb, by performing Adams' subcutaneous osteotomy of the neck of the femur, or of the bone below the trochanters.

The manipulation for the reduction of old luxations of the femur after the breaking up of adhesions, is the same as that employed in the reduction of recent luxations, except that the application of more force may be required, and for this purpose the compound pulley may be found convenient; the use of the angular extension apparatus of Bigelow is particularly indicated in cases of luxation of the dorsal or dorsal below the tendon variety, as offering the best chance of accomplishing reduction, and lessening the risk of fracture of the neck of the bone.—*Medical News*.

Koch and the Infective Element in Tuberculosis.

EVER since Villemin, more than fifteen years ago, claimed, as the result of his experiments on the lower animals, that tubercle was a specific disease, due to a special virus, almost endless experiments have been made in different parts of the world to test the validity of his statements. The outcome of their conjoined labors has placed the matter in a somewhat new light, for while it has been determined with great accuracy that the miliary granulum is a product of inflammation, it has also been shown, with about as much certainty, that various organic substances may produce it, and therefore to a certain extent it may be classed among the infective diseases. These results have been derived from the studies of Fox, Sanderson, Clarke, Cohnheim, Salomonsen, and Buhl. Those, however, who, like Cohnheim, Klebs, and Koch, maintain that the tubercle granulum is due solely to the interposition of a specific virus, have naturally hunted for it with their microscopes, but thus far when one has proclaimed a discovery he has obtained little credence, because these alleged discoveries have almost invariably proved premature. The latest announcement comes from Robert Koch, who has recently received an appointment as advisory councillor in the Sanitary Department in Berlin. He claimed by using aniline dyes to have been able to color certain minute bacterial organisms found in tuberculosis, and he is prepared to affirm that they are the essential elements that cause infection.

The dyes in question are methyl-blue and vesuvin, which cause peculiar staining, differentiating them from the ordinary bacteria of decomposition that take a purple color with hæmatoxylon. His method is as follows: A methyl-blue fluid is made, which consists of 1 c.c. of a concentrated alcoholic solution of methyl blue in 200 c.c. of distilled water, to which 0.2 c.c. of a 10 per cent. caustic soda solution has been added. The preparations remain in this mixture from twenty to twenty-four hours, or, if they are kept at a temperature of 104° F. in the water-bath, the time may be reduced to a half hour. Then the same preparations are flooded with a concentrated watery solution of vesuvin, and two minutes later are washed with distilled water. All animal tissues and ordinary

bacteria are now said to be stained brown (*lepra bacilli* excepted), but the tubercular parasite is colored blue.

He further announces that he has been able to isolate these bacteria from the others with which they are found, by successive cultures in the well-known sterilized fluids. He regards these bacteria as different from those that have been described by Klebs, Schuller, or Aufrecht. His experiments have been very numerous.—*Berl. Klin. Woch.*, No. 15, 1882.

Primary Cancer of the Lungs.

At the meeting of the Pathological Society of London held April 18, 1882, Dr. Fenwick showed a specimen of malignant disease of the right lung; he considered it to be a cancer, but as no sufficient microscopical examination had been made, this question remained doubtful, and was referred to the Morbid Growths Committee for settlement. He referred to the rarity of primary cancer of the lung, and gave some interesting statistics on this point. If the now generally accepted embryological classification of cancer be true, there is no difficulty in accounting for primary cancer in the lung, since epiblastic elements largely contribute to its formation. Undoubted cases of primary cancer have been recorded from time to time; though, compared with some other organs, the lungs are remarkably exempt from this form of disease, despite the varying and almost constant irritations to which they are subject. During the discussion, Mr. Butlin referred to the dissemination of cancer by the inhalation of cancerous particles from a diseased tongue. This view has frequently been advanced, but the grounds for accepting such a method of inoculation or grafting do not appear to us sufficient. It is well known that all attempts to engraft cancer even on animals predisposed to the disease, such as female dogs and cats, have hitherto failed; thus, while it would be premature to deny the possibility of such a mode of infection, it seems somewhat hazardous at present to trace a causal connection between lung and tongue cancer, such as the one just referred to, while there are other and more usual methods of accounting for its spread. Thus the lymphatics about the tongue are numerous and are early implicated in disease of this organ.

The blood into which the lymph is poured at the root of the neck after passing through the heart next circulates in the lung, and hence it is not difficult to understand the frequency with which these organs are affected with secondary deposits. There are still many interesting points to settle as to the histogenesis of cancer. For while the embryological doctrine of its origin holds good in a large proportion of the cases, yet a growth resembling true cancer is occasionally found in structures which are derived from the middle embryonic layer. Embryologists, it is true, are not agreed as to the exact origin of some organs; they would do well to study these moot points in the light of the pathological degenerations to which such organs (as the ovary and testis, for instance) are liable.—*Medical Times and Gazette.*

Iodoform for Soft Sores.

In the *British Medical Journal*, Dr. Walter Whitehead says that iodoform appears to be one of the most efficacious drugs in the treatment of the syphilitic non-infecting soft sore, when not unduly inflamed. It has, however, the unfortunate counterbalancing disadvantage of attaching to the patient the liability of unenviable suspicion, the public having become keenly alive to its distinctive and penetrating odor, and having also acquired an appreciative knowledge of the principal purpose for which the drug is most frequently used. He has succeeded, he thinks, in obviating this objectionable feature, without, apparently, sacrificing any of the therapeutic advantages of the drug, by using it in the following manner: He first very carefully cleanses and dries the sores, by means of little pledgets of bibulous paper, and then, by means of a camel's hair pencil, applies freely over the surface of the sores a solution of iodoform in ether. The ether rapidly evaporates, and leaves the iodoform uniformly spread in an impalpable powder over the sores. To insure a free application, the latter part of the process may be repeated and allowed to dry. When perfectly dry, each sore is given a coating of collodion, which is allowed to overlap, about a quarter of an inch, the area of each sore. Before the collodion has had time to dry, a pinch of absorbent cotton wool is placed on each patch, as a protec-

tion against the rough contact of clothing. This dressing is allowed to remain undisturbed for twenty-four hours, when the firm film which forms may be gently removed and a fresh coating applied. This treatment is continued day by day until all the sores have quite healed. He has found that a piece of gold beater's skin may be substituted for the collodion after the application of the iodoform. This process will suppress the odor, while a further advantage will be gained in the protection afforded by the collodion against auto-inoculation, and also against the risk of contagion from others coming in contact with the sores.—*Med. and Surg. Reporter.*

Hospital of the University of Pennsylvania.

SERVICE OF WM. GOODELL, M. D.

TWO CASES OF ABDOMINAL TUMOR.

HERE is a girl who has had for several years a tumor in the abdomen. It has been supposed to be an ovarian tumor, and was sent here as such. It is unusually high up for an ovarian tumor, but it may have a very long pedicle. I have to push it down to get it in the neighborhood of the uterus. I thought at first that it was a phantom tumor, then I thought it might have something to do with the liver, since it is high up and upon the right side, possibly a distended gall-bladder. The first thing to do in forming our diagnosis is to draw off the urine.

If this be an ovarian tumor, we should have some movement communicated to it when I move the womb, unless its pedicle be very long. As I move the uterus about with the sound, you see a very slight movement of the tumor; it is hardly perceptible. Then, again, it may be a cyst of the broad ligament. The uterine sound passes three and one-half inches. Movement of the tumor communicates a very slight motion to the uterus, as you can see by watching the sound. It seems to me that there is some attachment of the tumor to the uterus. The proper thing to do is to aspirate this tumor.

Don't forget that in doubtful abdominal tumors you must always pass the catheter; it will save you, some time, from getting into a scrape. How do you pass the catheter? If you fumble about and can not, for any rea-

son, pass it readily, do not hesitate to use your eyesight; ask for a candle, and see what you are doing. It is very often necessary to catheterize a woman after labor. The best way to do is to pass your index finger into the vagina, and directly above it feel the opening of the urethra with your thumb. Then, with your thumb as a guide, pass the instrument. Another way is to place the index finger directly over the meatus; this, however, is uncertain, and you may in doing so touch the clitoris, which you should always be careful to avoid. If you have to fumble about, don't hesitate, as I say, to call for a light.

A man on his native heath knows all the nooks and crannies about him; he is perfectly at home. So I push the tumor down as far as I can toward the pelvis, for here I feel that I am on familiar ground. There are no arteries to be afraid of, and taking the needle of the aspirator, I make a bold plunge in the linea aspera. A clear liquid flows out. What in the world a cyst of the broad ligament is doing so high up as this one, I don't know. It has no business there. It is possible that it has contracted adhesions to the omentum, and is dragged upward by it.

I have now under my care a lady who has a bursting cyst of the abdomen. These cysts of the broad ligament are very liable to burst. One of the parovarian tubules becomes plugged up and forms a retention cyst, if you choose to call it so. The walls are very thin, and in the case I allude to, the tumor bursts about every three weeks, after attaining the size of a lemon. In one case which I had, the cyst burst four times, and was tapped some ten times. Finally, I removed it successfully, and found but one adhesion, and that was to the omentum. This explained a severe pain the lady always suffered when the cyst burst, or when it was emptied by tapping; for the collapsed cyst then dragged down the omentum. The lady has been perfectly well ever since.

The fluid which I am now pumping out is not quite clear enough for a cyst of the broad ligament. Still, there is a little blood in it which discolors it. On the other hand, it is not quite thick enough for an ovarian fluid. I shall give it to Dr. Formad, who will examine it for ovarian cells.

Here are different fluids which I have removed in this amphitheatre at different times. These are two perfectly clear fluids from cysts of the broad ligament; one was re-

moved in 1874, and the other early in 1880, yet they retain their perfect limpidity. Here is a fluid removed from an ovarian cyst; it is dark and coffee-colored; and here is another not quite so dark.

Our next patient is thirty-two years of age, and has been married nine years. She has had three children and two miscarriages, the last miscarriage in February, 1879, nearly three years ago. Shortly after this the tumor began to form and has been growing ever since. She has been losing blood every day, she tells me, a few drops at a time, coming from the vagina and often in black clots. She knows, however, when her monthlies come.

If a lady were to come to me without any tumor, and tell me that she was constantly losing small quantities of blood from the womb between the monthly periods, I should say to myself that one of two lesions existed, either a polypus or a cancer of the cervix. Fibroid tumors of the womb do not usually cause a prolonged blood-dribbling; they will induce, as you well know, excessive menstruation, and so will a polypus, but they do not often cause the bleeding between the periods.

Is this a uterine tumor? She tells us that, at her monthlies, she doesn't lose too much. If we are dealing with a fibroid, we should expect it to produce a free flow at her monthlies. I ask her to let me uncover her face and see her tongue. She has the *facies uterina*. She has been losing flesh and has an anxious expression. When you see a face like that it means pelvic trouble. This is especially seen in the advanced stages of ovarian disease and is so characteristic of that condition that it has been termed the *facies ovariana*.

The diagnosis of these abdominal tumors is sometimes as easy as can be, but it may also be as difficult as can be. As I tap lightly upon one portion of this tumor, there is no fluctuation that I can perceive, but, as I reach the other side, I get a wave that can be transmitted, and I can outline the area over which the fluctuation is felt. This variation in the sense of fluctuation means that we have different cysts. The wave, however, isn't plain; it is not of a marked kind. Here, over the right portion of the tumor, I don't get any fluctuation at all. I have no doubt that we have, in this case, a mother-cyst with a number of child-cysts, each one containing fluid of varying density.

But how do I know that it is not dropsy of the abdo-

men? If the fluid were free, as in ascites, the intestines would float up to the surface, and we should have resonance above; whereas the fluid, gravitating to the sides and most dependent portions, would produce a bulging and the percussion-note would be dull. As I percuss, you notice that there is a semi-resonance over the ascending, transverse, and a descending colon. There is, in fact, a coronal resonance, but, at the same time, a dullness over the front of the tumor. Furthermore, as the patient lies on her back, the abdomen presents a convex front, and her form is unchanged. If, now, there were ascites here this surface would flatten, through gravity of the fluid toward the back and flanks. You would also find ascitic fluid displaceable by pressing on the abdomen; but there is nothing of the kind in this case.

The patient's history and our examination make it easy for us to exclude pregnancy as a possible cause of this tumor. I introduce the uterine sound and get a measurement of two and a half inches; but I am not satisfied with that measurement in a woman who has borne children. I try it again. You see I can move the womb easily with the sound. I have now hit the fundus and the pressure hurts her. This time we have a measurement of plus two and a half inches, almost three. I do not find any polypus whatever. There is an intense congestion of the womb; it contains more blood than it ought; a digital examination shows me that the womb is anteфлекed.

I am disposed to say that this is a cyst of the left ovary. I asked her if she has been obliged to pull out hairs from her lip and chin? She says not. Often, in cases of ovarian disease, and especially when double, a hirsute development is found upon the chin and a small beard will grow, which will need a razor.

You might be asked, "Can it not be a malignant tumor?" and, from the fact that the patient has not suffered pain during its growth, one might be led astray. But, as I said the other day, these tumors may develop without any pain whatever, and yet be very malignant. In all these cases we must remember that there is no such thing as infallibility, and that the best physician is not the man who makes no blunders, but who makes the fewest blunders.

The real point at issue is, Is this a uterine tumor or is it ovarian? I am satisfied to think that it is a cyst of the

left ovary, a multilocular cyst, one or more of the subdivisions of which yields a fluctuation which is not marked, because filled with a colloid material.

I shall now aspirate the tumor; and here let me show you a wrinkle worth knowing. I shall freeze the skin at the point of puncture by a freezing mixture of a lump of ice dipped into some table salt. Now I plunge in the needle, without, as you see, a wince of pain on the part of our patient. A straw-colored, syrupy fluid is pumped out, but the right side of the abdomen does not collapse. This shows the presence of another cyst. Without withdrawing the needle, I direct its point into this cyst, but I get nothing but a few drops of colloid material. The contents are too thick to flow. While we are waiting for this fluid to be removed, if possible, let me give you some golden rules about tapping.

First.—Instead of the old-fashioned trocar always use the hollow needle of the aspirator.

Second.—Always empty the cyst if you can possibly do so. This prevents the escape of fluid into the abdominal cavity, and consequently lessens the liability of peritonitis.

Third.—Plunge the needle preferably in the linea alba, where there are very few blood-vessels; and very rarely aspirate *per vaginam*, where many blood-vessels exist.

Fourth.—If, after tapping, the cyst inflames and septic symptoms set in, at once perform the operation of ovariectomy; this alone will save your patient.

NOTE.—The first patient recovered from the operation, and for two months there has been no return. On December 8, 1881, two weeks after tapping, the second patient was operated upon by Dr. Goodell before a ward-class of students. The left ovary had degenerated into a multilocular cyst, containing both clear fluid and colloid matter in separate cysts. This ovary, together with the right one, which was beginning to undergo cystic degeneration, was removed. The patient recovered promptly, and two weeks later was exhibited before the class.

Regina vs. Lamson.

ON Wednesday, March 8th, 1882, at the Central Criminal Court, before Mr. Justice Hawkins, George Henry Lamson, aged twenty-nine, surgeon, was indicted for the

willful murder on December 3d, 1881, of his brother-in-law, Percy Malcolm John, aged nineteen.

Percy Malcolm John, who was a cripple with curvature of the spine and paraplegia, had property to the extent of £3,000, half of which, at his death, would revert to the prisoner's wife. John had, for three years prior to his death, been at Blenheim House School, at Wimbledon, kept by Mr. W. H. Bedbrook. On December 3d, 1881, John was, with the exception of his paralysis, in good general health, and on that day had taken his meals, breakfast, dinner and tea, in company with Mr. Bedbrook among others. On Saturday, December 3d, Lamson called on John at Blenheim House at 6.55 P. M., and their interview took place in the dining room of Blenheim House, in the presence of Mr. Bedbrook. Mr. Bedbrook offered Lamson some wine, which he accepted, and Lamson then asked for some sugar, as the wine (sherry) was rather strong, and he said "sugar would destroy the alcoholic effects." A basin of white sugar was brought, and Lamson put some of it into his sherry. Lamson then produced a Dundee cake and some sweets, of which all three partook. At 7.15 P. M. Lamson produced a box of gelatine capsules from his pocket, and said, "Oh, Mr. Bedbrook, when I was in America I thought of you and your boys. I thought what excellent things these capsules would be for your boys to take nauseous medicines in." Lamson then gave a capsule to Mr. Bedbrook, and filling another with sugar, handed it to John, and said, "Here, Percy, you are a swell pill-taker; take this, and show Mr. Bedbrook how easily it may be swallowed." John swallowed the capsule; the prisoner soon said, "I must be going, and" at 7.21 P. M. left the house. A little after 8 P. M. John complained of heartburn, and soon after said, "I feel as I felt after my brother-in-law had given me a quinine pill at Shanklin. He was carried up to his bedroom and about 9 P. M. was found in great pain and vomiting. He complained that "his throat appeared to be closing, and the skin of his face felt drawn up." At 11.30 P. M. he died. John was treated by linseed poultices to the abdomen, white of egg beaten up with water, and two hypodermic injections of morphia of one-sixth of a grain and a quarter of a grain respectively.

The post-mortem examination of John's body was made on Dec. 6th, 1881, by Dr. Little and Mr. Berry, of Wim-

bledon, and Mr. Bond, of the Westminster Hospital. The spinal disease was found to be old and inactive. There were some old adhesions of the lung. The lips and tongue were pale. The cerebral meninges, liver, kidneys, spleen, and the mucous membrane of the stomach were much congested. The mouth and lips were pale. On the under surface of the large end of the stomach were six or eight yellowish-gray patches, a little raised, about the size of a small bean, and towards the smaller end were two or three similar ones. The heart was almost empty, but healthy. The lungs were congested, the posterior parts very much so.

The analyses of the viscera, vomit, and the articles of which John had partaken, were conducted by Dr. Stevenson, of Guy's Hospital, in conjunction with Dr. Dupre, of the Westminster Hospital, and the results obtained by the one were verified by the other.

The results were briefly as follows:—

1. Portions of the liver, spleen and kidneys treated by Sta's process gave evidence of slight traces of morphia, and the alkaloidal extract when placed upon the tongue produced the numb tingling sensation which is characteristic of aconite, and which, for the sake of brevity, we will call aconitism.

2. The contents of the stomach similarly treated produced aconitism.

3. The stomach itself similarly treated showed the presence of an alkaloid, but the extract failed to produce aconitism.

4. The urine gave evidence of morphia and aconite, and the extract obtained from an ounce of the urine killed a mouse in thirty minutes when injected under its skin; the symptoms being exactly similar to those produced by injecting a minute quantity of a solution of Morson's aconitine.

5. A mixture of the extracts from 1, 2, and 3, when injected under the skin of a mouse, killed it with similar symptoms in twenty-two minutes.

6. The vomit was found to contain muscle, starch, onion, vegetable pulp (probably apple), raisins, candied peel, and pine-apple essence. It contained neither morphia nor quinine, but very marked aconitism was produced by a minute quantity of the extract which lasted for over six hours, and when injected under the skin of a mouse it

produced powerful symptoms in two and a half minutes, and killed it in a quarter of an hour.

Dr. Stevenson considered that the vomit contained as much as a quarter of a grain of aconite.—*London Lancet*.

Forced Alimentation—Dangers and Means of Obviating Them.

DR. DESNOS, writing to the *Bulletin General de Therapeutique*, expresses the opinion that whilst forced alimentation is destined to be of great value in the treatment of phthisis, the introduction of the tube of Faucher and large amounts of the nutritive mixture through it may prove a source of danger, and thus present a serious obstacle to its use. Believing that in the interest of this new method its dangers should be early recognized, he has gathered a number of cases from his own practice and that of his colleagues illustrative of this fact. The first case that he mentions is that of a consumptive in whose lungs were cavities, and who complained of loss of appetite and inability to retain anything upon the stomach. Forced alimentation was tried after the œsophagus had been "educated" to the use of the tube for two days. One litre of milk was ordered; but hardly had a quarter of this quantity been introduced when a violent spasm of the stomach ensued; portions of the fluid were regurgitated through the mouth and nose, the face became livid, and asphyxia imminent. Upon the withdrawal of the tube, these symptoms somewhat abated, but within twenty-four hours a violent attack of pneumonia set in, which carried off the patient on the second day following. Particles of coagulated milk had been noticed in the sputa of the patient after the tube was employed, and at the autopsy it was shown that some of the regurgitated milk had found its way into the smaller bronchi and had there set up the fatal inflammation.

Three other cases are cited in which the intolerance was so great as to render the use of the tube inadvisable. The applications of the tube in these three cases were made by a house-surgeon of the Charity Hospital, from which it has been objected that the unfavorable results might have been due to lack of skill on his part. In reply to this objection, Dr. Desnos avers that the operator was

fully qualified, but that the method, to be of value, should be so simple and devoid of danger as to be capable of application by ordinary practitioners, under whose care the majority of such cases come. In conclusion, Dr. Desnos remarks that great care should be taken to prevent the entrance of any portion of the milk into the air-passages, and to avoid the contact of the tube upon its way downward with the exposed portions of the larynx. He has noticed that the signs of suffocation do not present themselves until the fluid reaches the stomach, which he believes to be due to the shock produced by the sudden fall of a comparatively large quantity of the liquid upon the lower surface.

Setting aside the cases in which an absolute intolerance contra-indicates the employment of the tube, there are still those in which the tendency to spasm may be overcome by administering the food slowly and at intervals. It has been claimed that the fever is lowered and diarrhœa disappears under forced alimentation; but this is not always the case; the reverse has several times occurred. Dr. Desnos gives the moment of relative or absolute apyrexia as the most favorable time for making the injections, and considers that the best results are obtained when the food is given in small quantities, varied in composition to suit the condition of the digestion.

Treatment of Diphtheria by Local Application of Boracic Acid.

BY T. D. HARRIES, F. R. C. S.

THE signal success which I have achieved in the treatment of diphtheria warrants my making known my plan of treatment, which is based upon the belief that the local mischief in this disease is due to direct inoculation and not secondary to the general disorder. The increase of febrile as well as the advent of the graver symptoms seem in the majority of cases of diphtheria to depend upon and to bear a close ratio to the extent of local mischief. Again, the duration of the disease is materially dependent on the amount of local mischief. The number of cases in which the primary deposit takes place in the larynx or trachea must be extremely rare, unless we are

willing to accept what is usually known as croup as such. I have never yet met with a case in which the pharyngeal deposit could be considered as an extension from the larynx; but have, on the contrary, mostly found upon careful examination the deposit to make its first appearance on the tonsils or pillars of the soft palate, or at any rate within easy reach of local applications; and as a topical remedy in diphtheria boracic acid is decidedly possessed of specific action. When applied early in the disease it completely checks exudation, and when the false membrane is already formed and extensive, it rapidly vanishes under the local treatment. Concomitantly with the disappearance of the deposit the symptoms subside. The fibrinous deposit seems to wither and fall off in pieces under its influence, rather than to be dissolved, in proof of which I have placed a portion of the membrane in a solution of boracic acid, and kept it at body heat for 24 hours without its exhibiting any material change sufficient to account for its rapid removal from the fauces. The solution is prepared and applied as follows: Boracic acid two drachms, glycerine half an ounce, water half an ounce; to be applied freely to the fauces every hour at first, diminishing in frequency with the disappearance of the deposit and general symptoms. The application should be continued for some days after the throat has become perfectly clean. I make it a rule to continue painting up to the eighth day, after which date the patient may be considered comparatively safe. The solution seems to have no injurious effect when swallowed, as I have frequently applied an ounce during 24 hours in the cases of children of from four to five years of age.—*Lancet*, Feb. 25.

The Nerve Element in Whooping-Cough.

OF late years the profession has bestowed very little, if any, serious scientific attention on some of the commonest of common maladies. Whooping-cough is conspicuously among the neglected ills to which, notwithstanding the forgetfulness of the multitude of earnest clinical investigators, flesh is still heir. Many years ago the nerve-element in this troublesome and too often evil-working, if not in itself dangerous, affection, engaged much consideration, and treatment was specially directed

to its relief. It would be well if the investigation of this feature of the etiology of the affection could be resumed. The fact that pertussis belongs to the class of maladies which are communicable and "catching" does not take it out of the range of probability that the specific action of a morbid poison on the nerve centres may be the efficient cause of the disease. Although the occurrence of the affection happening rarely more than once in the life of any individual may seem to point more directly to the fertilizing of latent germs in the organism than to any special excitation of the nerve centres, we do not, as yet, know enough of the *modus operandi* of morbid influences—"germs," or poisons as we call them—in the blood and the tissues to define the part which the nerve centres play in the production of morbid phenomena. In any case, such relief is frequently obtained even in the earliest stages of whooping-cough from mild periodic counter-irritation over the whole length of the spinal column by a mustard-poultice, which merely reddens the skin without vesication, that it would be well worth while to study this method closely from the therapeutic as well as the clinical standpoint. It certainly does good; but how? In cases where the mustard-poultice, applied for six or eight minutes—not longer—over the whole length of the spine immediately before putting the child to bed every night, for a week, or, in seriously spasmodic cases, a fortnight, does not procure a permanent amelioration of the cough, the effect of this remedy is enhanced by sponging the spine with iced water quickly each successive morning. In cases where the paroxysms of cough seem to be repeated and to continue from sheer exhaustion of the nerve centres, coffee, administered as a drink, will often stimulate the energy of the centres so as to put an end to the malady. These are practical points which require theoretical explanation.—*London Lancet*.

CEREBRO-SPINAL MENINGITIS IN NEWBORN INFANT.—Dr. Bambas communicated to the Medical Society of Athens an account of the case of a young mother, who, seized with fever and convulsions, with opisthotonos, gave birth to an infant, which seemed in a perfect state of health. Nevertheless, she died, and a few hours afterward the newborn infant was seized with febrile symptoms, to-

gether with rigidity of the neck and well-marked opisthotonos. It died in a few hours, and Dr. Bambas concludes that it did so as the result of very acute epidemic cerebro-spinal meningitis.—*Progres Med.*

MICROSCOPY.

Life in a Jar of Water.

Looking over some jars of water a few days ago, that had been standing for months in a window, one of them, a quart specie-jar having a single growing spray of *Nitella*, with some vegetable debris at the bottom, was found to contain hundreds of hydras, attached to the sides and to the plant. These were the progeny of about half a dozen specimens that were placed in the jar a couple of months previously. By occasionally feeding the animals with entomostraca, they will flourish in an aquarium for an indefinite length of time.

The hydras, as first observed, all belonged to the common green species, *Hydra viridis*. Later, however, we were able to find a flesh-colored hydra among them, belonging to a different species. These flesh-colored forms were rather larger than the green ones, and the tentacles were much longer, and more slender and graceful. They belong to a different species, *Hydra vulgaris*. In another jar, in which an abundance of *Nitella* had been vigorously growing all winter, a small, feathery, olive-green ball was observed, the nature of which was quite unknown until it was examined under a microscope. It floated free in the water, and was readily drawn up in a dipping tube. A glance through the microscope revealed its nature. It was a young *Tolypothrix*, which, upon further study, proved to be *T. muscicola*, a common form. The characteristic feature of this genus of algæ is the peculiar manner of branching. The filaments are straight through the greater part of their course, but where they branch, the lateral filament runs along for a short distance almost parallel with the main filament, and then diverges from it. The color is dark-green, or olive-green as it is usually called. How it ever came to grow in the jar is a mystery; for it is long since we found that

plant in any of our collections. The spore must have remained latent in the jar for months before it began to grow.

Hints to Amateur Microscopists.

BY REV. W. S. FALKINBURG.

I PRESUME that one, at least, of the almost imperatively necessary qualifications of a microscopist is ingenuity. When one is a thousand miles from the manufactory of accessories, or when, if he were within one square, on account of the lack of the "root of all evil," he is unable to purchase what he needs, a friend helps him to make it for himself, or helps a near neighbor to do it for him, I think it certainly is the act of "a friend indeed." I have the misfortune to belong to the class whose "ship has not come over," and as the family of these is large, let me tell how I improvised an excellent bull's-eye condenser, hoping that I may help some brother microscopist.

First I cut a disc of sheet-tin, 2 inches in diameter. Then, using a piece of French plate-glass (as thin as possible), I cut it, as near the size of the tin as I could, with a steel-disc glass cutter; then, with a pair of scissors held under water, I cut the glass to the exact size and shape of the tin, then ground the glass upon a grindstone, until it was round and smooth. Then, taking an old-fashioned bull's-eye watch-crystal, such as watchmakers have, I ground the side that would be next to the face of the watch, until it lay perfectly flat and snug upon the plate-glass. Then, after carefully cleaning the glasses, filled the crystal with warmed glycerine, and covered it with the plate-glass, just as we drop the cover upon a slide, so as to enclose no bubbles.

Then wipe off the overflowing glycerine and cement the edge of the crystal with gold-size.

I then made a cell of sheet-brass, but a blacking box of the right size will answer. Solder a tin or brass tube to the side of it. Fit a $\frac{1}{4}$ -inch wire into the tube. Let the wire pass through a cork placed upon an upright rod, and fasten this into a solid foot, and it is complete.

My condenser is a plano-convex, $1\frac{1}{2}$ inches diameter and of 3 inches focus.

I have painted the brass and other work, and have used it daily to perfect satisfaction.

Greenwood, Ind.

GLEANINGS.

TREATMENT OF ACUTE TONSILLITIS BY ICE AND QUININE.—Abstract from a clinical lecture delivered by Dr. J. M. Da Costa, recently published in the *Clinical Record*.

To conclude our exercises this morning, I will show you a case of very great interest in itself, but one that is frequently encountered in private practice, and therefore important for you to see.

This man is suffering with violent acute tonsillitis; the tonsils, as you can see, are still inflamed; they were enormously swollen. He had, when he came in, eight days ago, considerable fever; the temperature at one time was up to $103\frac{1}{2}^{\circ}$, but it did not long remain at this height. The attack began with a chill, soon followed by fever, mucous expectoration, sore throat, but nothing like a diphtheritic deposit upon the surface. Both tonsils were swollen; he had a high fever. It was a case of more than average severity, and in such cases the attack usually terminates with suppuration of the tonsils. It is rare that treatment will succeed in making the inflammation subside without it.

We gave him ten grains of quinine daily, at first in a single morning dose; afterwards in divided doses. We allowed him to suck ice freely; and also, bearing in mind our recent case of parotid swelling, we applied the ice in bags to the outside of the throat, assiduously. This was carried out very effectually; for in place of the profuse suppuration which usually takes place in such cases in the tonsils, it has only been superficial and very slight, and has affected only the tonsil. Therefore we have reason to be pleased with the effects of the ice and quinine treatment in this case. Otherwise nothing locally was done; he used a little water as a gargle but no astringents; we relied solely upon the ice which he sucked, and had applied to the angles of the jaw.

Now, gentlemen, this is a frequent disease and is very painful; if suppuration occur it is prolonged. I have

called your attention to it solely with regard to its therapeutics; it presents no difficulty in diagnosis, though obscure in its pathology. In severe cases I believe that the treatment followed in this patient promises very satisfactory results.

THE USE OF MERCURY AND OTHER REMEDIES IN THE TREATMENT OF SYPHILIS.—Dr. G. H. Fox, of New York, has published some views on the therapeutics of syphilis that are the results of an extended experience. He first lays it down as an axiom that mercury is our most valuable remedy, but hastens to add, as a corollary, that its value has been overrated. Some of his worst cases of chronic syphilis have been those in which mercury has been given persistently for one or two years; in this connection the value of hygiene and tonic measures is strongly urged upon the profession. Syphilis, in his opinion, tends to a spontaneous cure, at least in the majority of instances, and in most acquired forms is far less malignant than is usually supposed. Many cases will progress satisfactorily to a cure without mercury. Of all the various methods by which mercury may be introduced into the system, that by internal medication has advantages over others by inunction, baths, or hypodermic injection. No locally irritant action should be permitted, and indeed the doses may be so small as not to give the slightest danger of salivation. The duration of treatment should be related to the severity of the case and the success that attends the therapeutical measures.

Iodide of potassium has also a positively curative effect in syphilis, though excellent authorities may oppose this view. It does its work quickly or not at all. In this connection he urges attention to the danger that attends the use of large doses, and observes that he has seen syphilitic patients dying in hospitals where heroic doses of potash were hastening the fatal termination. Iron and cod-liver oil are useful adjuvants—the former especially as an astringent to counteract the laxative effects of mercury, the latter for the syphilitics who have a strumous diathesis, or for late lesions that are unusually persistent.—*New York Med. Journal.*

ON INFLAMMATION OF THE EYES IN NEWBORN CHILDREN.—Dr. Samelsohn, of Cologne, in discussing the various fea-

tures of this malady, remarks: "Inflammation of the eyes in the case of newborn children does not usually arise, as many consider, from unknown influences of the weather or from exposure to a too powerful light; but rather from the eyes at birth receiving the contact of a contagious substance, the sources of which are abundant among the lower classes of the population, particularly in large cities." According to Dr. Samelsohn's observations, the symptoms of this malady do not appear immediately after birth, but between the third and fifth days of the infant's life. The child, which has hitherto opened its eyes freely, now closes them obstinately against the light, and becomes restless, while a swelling of more or less important character affects the inflamed eyelids, and from the opening of the lids there flows a matter of a yellowish color. If this suppuration can not be arrested the cornea is often destroyed, and the power of vision irretrievably lost. With respect to the most effectual remedies, Dr. Colsman remarks that the eyes have been successfully disinfected "by dropping into the eyes immediately after birth solutions of two per cent. of the carbolic acid or nitrate of silver and by fomentations of a solution of salicylic acid during the first twenty-four hours, with a view of preventing the outbreak of the disorder."—*Lancet*.

PNEUMONIA, DIPHTHERITIC GASTRITIS.—*Stated Meeting, January 6, 1882*.—Dr. Osler exhibited (*Montreal Medico-Chirurgical*) the specimens, which were taken from a man aged sixty-six, who was admitted to the General Hospital with great shortness of breath and prostration, and died in six hours.

Dr. Bristowe, of St. Thomas' Hospital, was the first to describe diphtheritic inflammation of the alimentary canal in pneumonia; he met with it in the colon in two out of thirty secondary, and in four out of sixteen primary pneumonias. Dr. Osler, in about fifty autopsies in primary pneumonia, had met with five instances of croupous or diphtheritic colitis. This was the first specimen in which the stomach was affected. In connection with this, he called attention to the frequency of the so-called diphtheritic endocarditis in pneumonia; thirty-eight per cent. of the cases which he had analyzed occurred with inflammation of the lungs. The extreme distension of the stomach had probably taken place during life and in connec-

tion with the gastritis; it doubtless assisted in bringing about the fatal termination by embarrassing the heart and compressing the healthy lung.

The President, Dr. Ross, remarked on the latency of pneumonia in old men, and on the special liability of these cases to sudden death from heart failure.—*Medical News*.

THE NEW EXHILARANT.—Our readers probably observed with some surprise the announcement in *The Times* of the remarkable exhilarating effect stated by M. Lutun, of Rheims, to be produced by a not very unusual combination of drugs, ergot of rye and phosphate of soda. In case they may desire to make some observations on the point, we give the doses alleged to produce the extraordinary effect. Tincture of ergot of rye, eighty-five minims; phosphate of soda, twenty-two grains; dissolved in a small quantity of water, and taken in a single dose, fasting. The effect on the first patient was manifested in three-quarters of an hour. She laughed continuously for half an hour, and each dose was followed by similar effects. Another patient in the same ward begged to take so delightful a drug, and manifested similar effects, and so also did an old woman of seventy-one. In a chlorotic girl it caused at first some nausea, then flushing of the face; an agreeable warmth spread over the body, and shouts of laughter burst forth and continued during the greater part of the day. In men, however, no such effects were produced—merely slight giddiness and headache.—*London Lancet*.

PROPER WAY TO GIVE ACONITE.—In the *London Medical Record*, Dr. William Murrell makes some judicious observations on the correct plan for administering aconite so as to secure its most advantageous action. He observes that aconite does act best in small doses frequently repeated. Many practitioners get no good from aconite because they do not know how to use it. The dose of the tincture recommended in the British Pharmacopœia—from five to fifteen minims—is absurdly large, and no one with any respect for his patient's safety, or his own reputation, would think of giving it. The best way is to put half a drachm of the tincture in a four ounce bottle of water, and to tell the patient to take a teaspoonful of this every ten minutes for the first hour, and after this hourly

for some hours. Even smaller doses may be given in the case of children. The great indication for the use of aconite is elevation of temperature; the clinical thermometer and aconite bottle should go hand in hand. If properly used, aconite is one of the most valuable and indispensable drugs in the Pharmacopœia.—*Kansas Medical Index.*

TREATMENT OF ACUTE DYSENTERY WITH ACONITE.—Dr. William Owen (*Indian Medical Gazette*) reports one hundred and fifty-one cases of acute dysentery occurring in the Convict Hospital, Port Blair, India, which were treated with tincture of aconite. All the cases were typical examples of acute dysentery, and all, with one exception, recovered. He states that he was led to give aconite a trial, as the remedy most likely to be successful, from the following considerations: 1. From its beneficial action in other acute inflammations; 2. From its effects on the capillaries of the skin, which it dilates, thus relieving internal congestion; 3. From its antipyretic action in febrile cases; 4. From its sedative action on the mucous membrane of the stomach and intestines, and its beneficial action in some forms of dyspepsia. In the first case in which he tried this remedy he was somewhat diffident, and he had ten cases in which a combined treatment of ipecac and aconite was used. However he soon discontinued the ipecac entirely, finding there was no occasion for its use.

Dr. Owen gives one minim every quarter of an hour for the first two hours, and a minim every subsequent hour, or thirty minims in twenty-four hours. This method he finds to be followed by the best results, inasmuch as the action of the medicine is more rapidly established, and an effect on the disease was more quickly produced than by the other methods.—*Med. News.*

HAMMOND ON THE THERAPEUTICAL USES OF NITRO-GLYCERINE.—At a meeting of the *New York Neurol. Soc.*, held on Oct. 4, 1881, Dr. W. A. Hammond read a paper on the therapeutics of nitro-glycerine. He had used it with much success in the treatment of migraine. A very severe case was described. Previous remedies had done no good. One drop of the one per cent. solution was given; pain almost instantly ceased, and in fifteen minutes the patient was up and well. Five days later she

had a similar attack, which was cured as before. She was then put on a regular course of the drug, and for the last nine months has not had a single attack. It was given in from fifteen to twenty cases, with the most complete success. He was satisfied that it was of use in epilepsy, and often gave it in the status epilepticus when the bromides and other remedies had failed. A child who had suffered from epileptic attacks three or four times a week for two years, was cured by drop-doses of the one per cent. solution. He had also used it with benefit in angina pectoris.—*London Med. Record*.

CAPACITIES OF LUNGS.—Dr. Nagorsky, having measured the capacities of lungs of 630 boys and 314 girls in the schools of the district of St. Petersburg, now publishes the results of his investigations in a Russian medical paper, the *Surgeon*. He has found that the capacity of lungs in relation to the weight of the body is 65 cubic centimetres for each kilogramme of weight in boys, and 57 cubic centimetres for girls. The law of Quetelet being that, with children below fifteen years of age, the weight of the body is proportionate to the square of the height, Dr. Nagorsky has found that it is proportional to 2.15 of the same; while the capacity of lungs is proportional to 2.4 of the height for boys, and Dr. Nagorsky's researches will soon be published as a separate work. As to the relation between the weight of man and the capacity of lungs, it is tolerably permanent and its variations are mostly due to the differences in the amount of fat in the bodies of different men.—*Gaillard's Journal*.

EXCISION OF THE PYLORUS BY AN ENGLISH SURGEON.—Mr. T. A. Southam, of Manchester, England, recently removed the pylorus along with nearly a third of the stomach, from a man aged forty-three, suffering from carcinoma of the parts which were taken away by operation. A hard and freely movable mass could be felt through the abdominal walls; and operations were determined upon. The operation was performed antiseptically, after the method adopted by Professor Billroth. Thirty-nine silk ligatures were found necessary for uniting the duodenum to the stomach. The shock succeeding the operation, which lasted one hour and a half, appeared to be very slight, and for twelve hours the patient appeared to be doing well.

He then died very suddenly; as Mr. Southam thinks, from the acute septicæmia described by Dr. Sims.

EFFECT OF DRUGS ON LACTATION.—The practical conclusions of Dolan and Wood, in *Practitioner*, are: 1. Therapeutical agents intended to act upon the mammary gland must enter the blood. 2. Drugs derived from the natural orders Liliacæ, Cruciferæ, Solanacæ, Umbelliferæ, etc., enter the blood and impregnate the milk, hence caution is needed in giving such drugs to nursing women. 3. The only approach to a true galactagogue is jaborandi. 4. Belladonna is an antigalactagogue. 5. In inaction of the mammæ the milk may be increased and influenced by medicines. 6. The milk may be increased in heat-forming elements by administration of fats. 7. The salts of milk are improved by administration of medicines. 8. Various physiological actions—purgative, alterative, diuretic, etc.—are produced in the child by giving drugs to the mother. 9. We must look to diet for improvement in milk-secreting power, both as to the quantity and quality of the milk.—*Louisville Med. News.*

ACONITE POISONING.—Dr. E. T. Reichert (*Philadelphia Medical Times*, November 19, 1881), gives an analysis of the treatment of forty-one cases of aconite poisoning. Evacuation of the stomach, the administration of large doses of stimulants and the use of external stimuli was the system of treatment pursued in the majority of cases. Opium and its preparations were used in four cases, all of which terminated favorably. In one case five and a half drachms of laudanum were administered in four hours without causing narcotism. Digitalis was administered in two cases in connection with other stimulants. One died and one recovered. The latter, who had taken an ounce of Fleming's tincture of aconite, received three hypodermic injections, each of twenty minims of tincture of digitalis, within an hour. Amyl nitrite was used with marked results in one case, and certainly deserves an extended trial in aconite poisoning, as it is a marked cardiac stimulant. Tincture of nux vomica was used in one case with marked benefit to the heart and respiration.—*Chic. Med. Review.*

GIVING OPIUM.—It is of frequent occurrence that opium and its alkaloids are rejected by the stomach, and the

physician is put to his wits' end to find some substitute when hypodermic medication will not do. Owing to the tendency of opium *per orem* to nauseate, belladonna is prescribed; but this is not a perfect substitute, and my experience with Jamaica dogwood leads me to regard it as an unreliable and costly experiment. To overcome the nauseating effect of opium is to break down the principal barrier to the use of a great remedy. To this end I have recently used with unvarying good results the oxalate of cerium in combination. I generally combine one grain of opium with five to ten grains of oxalate of cerium, and have yet to see it rejected by the stomach. It will be useless to give less than five or ten grains of the oxalate. —*Louisville Med. News.*

CHRONIC GENERAL PERITONITIS.—In the December number of the *New York Medical Journal and Obstetrical Review*, Dr. Alfred L. Carroll, of New Brighton, New York, records an interesting case of chronic general peritonitis, which seemed to have taken its origin in an old pleurisy on the left side, the inflammation passing through the diaphragm and causing at first a perihepatitis, or perhaps an intermediate perisplenitis. The case exemplifies a condition that has been classed among the curiosities of medical experience, for chronic general peritonitis, independent of tuberculosis or carcinosis, is either ignored or its existence denied by most writers, save as a protraction of an acute purulent attack, and the few who recognize its existence differ as to its pathology and clinical history.

EFFECTS OF EXCISION OF SYPHILITIC CHANCER.—M. Mauriac reports (*Gazette des Hopitaux*, 1881, No. 7, 10, 14) seven carefully recorded cases in which he excised the initial lesion of syphilis. In six, excision was performed at periods varying from four to sixteen or eighteen days of the appearance of the sore. In the seventh case, the initial lesion was excised about fifty hours after it had been first noticed, and before there was the least trace of glandular enlargement, but in this, as well as in all the others, the operation was unsuccessful in preventing further development of the disease.—*London Med. Jour.*

MALTINE AS A CONSTRUCTIVE.—Dr. L. P. Yandell says: "Maltine in its different forms is the only malt preparation I now employ, being so palatable, digestible and easily assimilated. Of its efficiency in appropriate cases

there is no more doubt in my mind than there is of the curative power of quinine, cod liver oil, the bromides and the iodides. It deserves to stand in the front rank of constructives; and the constructives, by their preventive, corrective and curative power, are probably the most widely useful therapeutical agents that we possess."—*Louisville Med. News*.

IMPROVEMENTS IN HYPODERMIC INJECTION.—Dr. Mason recommends the following as the best way of dealing with the piston of the hypodermic syringe when its packing gets worn and loose so that it does not work readily. Remove the small nut at the end of the piston and take half of the packing off (it is usually in two parts) and place between them a piece of chamois-skin. Cut it round, leaving it somewhat larger than the packing. It will absorb water, swell, and completely fill the barrel. A trial of this will convince the most skeptical of its value over all other devices to do away with the most annoying feature connected with the use of the syringe.—*Med. Times and Gaz.*

EFFECTS OF EXCISION OF SYPHILITIC CHANCRE.—M. Mauriac reports (*Gazette des Hopitaux*, 1881, No. 7, 10, 14) seven carefully recorded cases in which he excised the initial lesion of syphilis. In six, excision was performed at periods varying from four to sixteen or eighteen days of the appearance of the sore. In the seventh case, the initial lesion was excised about fifty hours after it had been first noticed, and before there was the least trace of glandular enlargement, but in this, as well as in all the others, the operation was unsuccessful in preventing further development of the disease.—*London Medical Record*, June, 1881.

BOOK NOTICES.

AN INDEX OF COMPARATIVE THERAPEUTICS, with Tables of Differential Diagnosis, A Pronouncing Dose—List in Genitive Case, A List of Medicines Used in the Homœopathic Practice, Memoranda Concerning Clinical Thermometry, Incompatibility of Medicines, Ethics, Obstetrics, Poisons, Anesthetics, Fees, Asphyxia, Urin-

ary Examinations, Homœopathic Pharmacology and Nomenclature, etc., etc. By SAMUEL O. L. POTTER, A. M., M. D., President of the Milwaukee Academy of Medicine. Second Edition. Chicago: Gross & Delbridge.

As the description and object of this work are best set forth in the Preface, we will quote from it.

"The object aimed at in this book is to present the therapeutics of the two great medical schools in the manner best adapted to comparative study and quick reference. In parallel columns are placed the remedies recommended by the most eminent and liberal teachers in the regular and homœopathic branches of the profession. The drugs common to both schools are in black type, and following them, in *italics*, are the remedies peculiar to each; with short, concise indications for their use, and reference to authorities for all statements except those made by the compiler. These references enable the book to be used as an index to the authorities for more strict differentiation between indicated drugs."

The work will undoubtedly be found the very best of the kind to those who desire to study comparatively homœopathic treatment of diseases and that of regular medicine.

A MANUAL OF OBSTETRICS. By A. F. A. King, M.D., Prof. of Obstetrics and Diseases of Women and Children in Medical Department of Columbian University, Washington, D. C., and in the University of Vermont, etc. With 58 Illustrations. 12mo. Pp. 325. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: R. Clarke & Co.

This is ~~quite a small work, but, nevertheless,~~ contains a very large amount of valuable information both for students of medicine and practitioners. It forms quite a complete system of midwifery, presenting all the main facts of the art, briefly, of course, but sufficiently full for all practical purposes. It shows in how small a compass a work on an extensive subject may be brought when all unnecessary verbiage is omitted, and the author limits his teaching to settled facts, and consumes no space in theoretical discussions. To students in attendance upon medical lectures the work will be of especial value, as it

can easily be carried in the pocket and referred to at any moment to refresh the memory.

As with most of the works on midwifery, the female pelvis—its anatomy and diameters—and the foetal head are considered in the first pages of the work. After these have been sufficiently described, chapters follow on Menstruation, Fecundation, Signs of Pregnancy, Diseases of Pregnancy, Abortion, etc.

The mechanism of labor, the most essential part of obstetrics, is very fully set forth—nothing being omitted necessary to afford a full understanding of it. The use of the forceps, also, and of other instruments is quite accurately described.

To be brief, we can assure our readers that they will find this small work to be a full *expose* of the whole art of obstetrics, nothing being omitted essential for the accoucheur to know. We predict great popularity for the work.

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By Louis A. Duhring, M. D., Professor of Diseases of the Skin in the Hospital of the University of Pennsylvania, etc. Third Edition, Revised and Enlarged. 8vo., pp. 685. Philadelphia: J. B. Lippincott & Co. Cincinnati: R. Clarke & Co.

The first edition of this work was published in 1876. A second and much improved edition followed in January, 1881; and now, about the middle of 1882, a third edition is called for. A work for which there is so great a demand that several editions are required in only a few years, must be held in great esteem by the profession.

It has been the object of the writer to render the subject of diseases of the skin simple and intelligible, and to free it from unnecessary encumbrances. He has, therefore, scrupulously avoided all questions of theory, discussion of unsettled points, and the introduction of obsolete terms. There is no class of diseases so difficult to obtain a knowledge of, so as to successfully diagnose them when met, as are diseases of the skin. We have known physicians to wrest with them for a long time, with great patience, endeavoring to learn from books their characteristic features, so as to be able to recognize them when brought under their observation, but when brought in

clinical contact with them, they would be quite at sea, only able to make out a diagnosis, with any degree of confidence, in cases of the simpler varieties. But in Professor Duhring's work, the descriptions of the various affections are so plainly set forth, the pathognomonic signs are so prominently stated, that it seems to us that, even without clinical illustrations, the student could obtain a very correct knowledge of diseases of the skin and have no difficulty in their diagnosis.

Considerable improvements have been made in the third edition, so that the work has been brought fully abreast of the present advanced knowledge. We have no doubt but that it will continue to maintain its great popularity, as it deserves.

"MULTUM IN PARVO." The Vest-Pocket Anatomist (Founded upon "Gray"). By C. Henri Leonard, A. M., M. D., Professor in Michigan College Hospital. Eleventh Revised Edition. Enlarged by Sections on the Anatomical Triangles and Spaces, Herniæ, Gynecological Anatomy, etc. 16mo. Pp. 82. Detroit: Medical Journal Co.

The design of this little work, as shown by the contents of the title-page, is to exhibit, very briefly, the leading features of anatomy. It answers a very good purpose in the way of refreshing the memory. Carried in the pocket, the student can consult it any time as to the attachment and insertion of muscles, course of blood-vessels, etc. It can not be made to take the place of larger works, but will be convenient as a reminder, especially just previous to entering the examination room.

EDITORIAL.

THE AMERICAN MEDICAL ASSOCIATION.—The meeting of this Society has just been held at St. Paul, Minn., commencing June 6th, and continuing until the 9th. The President, Dr. J. J. Woodward, being in Europe, Dr. P. O. Hooper, of Arkansas, first Vice President, acted as presiding officer. The meeting was one of the very largest ever held.

Dr. N. S. Davis, of Chicago, presented a preamble and resolution in behalf of the Woman's National Christian

Temperance Union, asking the Association to express its approbation of the introduction of a more perfect study of physiology and hygiene, including a knowledge also of the evil effects of intoxicating drinks, into all public schools supported at public expense. It was referred at the request of Dr. Davis to the Section on State Medicine and Medical Jurisprudence.

As regards the term ALLOPATH, Dr. Dennison, of Colorado, offered the following, which was referred to the Judicial Council :

"Rational medicine, being based upon experience and pathological research, demands absolute freedom in the selection and administration of materia medica; and there is nothing in the code of ethics of the American Medical Association prohibiting the use by its members of any known and honorable means of combating disease. Furthermore, as contributing to the alleviation of human suffering, we hail with pleasure and gratitude every discovery in etiological and therapeutical science by whomsoever made.

"We therefore reject as untrue and obnoxious the term "Allopathists" as applied to the members of this Association by dogmatists and extremists without its fold.

"*First.*—Because it tends to convey the erroneous impression that we are restricted to the choice of remedies and the method of using them by other than the limits of rational science.

"*Second.*—Because for any association of men claiming to practice the profession of medicine to adopt a name based upon limited and conjectured theories of therapeutics for the purpose of designating a particular school of medicine, we have always held, and still regard, as unscientific in principle and dangerous in practice."

The following resolution was adopted by the Association in response to the above:

"*Resolved,* That no action of this Association, either in its Code of Ethics or its annual meetings, should be construed to commit members of the American Medical Association to adherence to any dogma, and members should have the care not to allow their names to be erroneously registered as "allopathists," etc., in State or city registers of physicians."

Dr. J. G. Thomas, of Georgia, offered the following resolution:

"*Resolved*, That the Association approve the organization of faculties in medicine having no other foundation than the examination for degrees, as a measure which will increase the value of the present methods of education in medical colleges in this country."

Dr. N. S. Davis, of Illinois, seconded the resolution in a speech defending the establishment of independent boards by the universities.

Dr. Ranschoff, of Cincinnati, opposed the measure as casting a slur upon medical colleges and medical teachers. He contended that, as all classes of practitioners could demand and obtain representation on such boards as were contemplated by the resolution, such a measure would have the tendency to retard medical progress and encourage irregular sects by giving them legal recognition.

Dr. Garcelon, of Maine, opposed the resolution.

On motion the resolution was postponed.

On motion an honorarium was voted the Secretary.

Dr. Toner, of Washington, gave notice of an amendment to the Constitution by which the Secretary should serve without compensation.

Dr. J. A. Octerlony, of Louisville, presented an exceedingly interesting Address to the Association on the PROGRESS OF MEDICINE. We have space for only an extract or so. He said:

"Not many years ago the *nervous system* was the *terra incognita* of medicine; but now many heretofore obscure affections are well understood.

"Pulmonary consumption affords another illustration of advancement made in medicine.

"In hepatic pathology the recognition and description of hypertrophic cirrhosis of the liver is of comparatively recent date. Billroth had performed the brilliant operation of removing the pylorus; but simple washing out the stomach constituted an improvement in therapeutics of a higher order."

Dr. Octerlony then gave a *resume* of what the microscope had done for medicine. Leprosy had been found by Eklund, of Sweden, and Hanser, of Norway, to depend upon a vegetable parasite—"micrococcus lepræ" of the former, and "bacillus lepræ" of the latter—and Neisser, of Breslau, Ferd Kohn, and Koch had confirmed the correctness of these observations. The cause of typhoid fever had been found to be the "ileotyphoryton Kleinii,"

and the blood of a scarlet fever patient contained the "plax scindens." It had been demonstrated by Dr. H. C. Wood that diphtheria is due to the presence of microscopic fungi, and Tommasi, of Rome, and Klebs had proved that malarial fever is caused by the "bacillus malarie."

In helminthology great advances had been made by means of the microscope, and the danger to life caused by trichinæ was not known until the year 1860.

In all this work the exclusive systems in medicine have had no share whatever. So far as any true advancement is concerned they have been entirely barren. Not a single oasis relieves the dreariness of the view. Not a single flower of science has blossomed in their uncongenial soil. Not a single original contribution has been made by them to anatomy, physiology, histology, chemistry, pathology, etiology, and public hygiene. Nor is it known that any one belonging to the ranks of these irregulars has ever achieved distinction in the fruitful field of other sciences in which the cultivators of scientific medicine have won so much glory, and have performed such noble exploits. The names of Linnæus, Berzelius, Draper, Nott, and Leidy, and many others form brilliant constellations which shall continue to illuminate the firmament of science after homœopathy and kindred delusions shall have been swept away by the relentless winds of oblivion.

But with all this, that which still remained desirable was some general law which would give "unity to our methods and precision to our results."

The address was referred to the Committee on Publication.

Dr. Gihon called up his resolution on expert testimony, which had been laid on the table on Thursday, and offered the following as a substitute, which he said obviated the objections made to the original resolution:

Resolved, That it is the sense of the American Medical Association, that it will be conducive to justice and the dignity of the profession, if medical expert testimony can be presented to the courts without having the appearance of being biased by any intention to influence either side of a case, but simply to state scientific facts.

The resolution, after a little running debate, was unanimously adopted.

Dr. N. S. Davis introduced the following:

Resolved, That after the next annual meeting the per-

manent interests and influence of this Association would be best promoted by again holding every second meeting in Washington, as its home on common national ground, and not as invited guests, while each alternate meeting should be held in such section of the Union as would be most useful in promoting the society organizations in all parts of our country. Adopted.

The Committee on Nominations presented the following report:

President.—John L. Atlee, M. D., of Lancaster, Pa.

Vice-Presidents.—Drs. Eugene Grissom, of North Carolina; A. J. Stone, of Minnesota; J. A. Oetlerony, of Kentucky; H. S. Orme, of California.

Treasurer.—R. J. Duglison, M. D., of Pennsylvania.

Librarian.—C. H. A. Kleinschmidt, M. D., of Washington.

Chairman of Committee on Arrangements.—X. C. Scott, M. D., of Cleveland.

Assistant Secretary.—I. N. Himes, M. D., of Cleveland.

Members of Judicial Council.—Drs. N. S. Davis, of Illinois; J. M. Brown, of United States Navy; X. C. Scott, of Ohio; M. Sexton, of Indiana; N. C. Husted, of New York; Wm. Lee, of Maryland; J. E. Reeves, of West Virginia.

Committee on Necrology.—Dr. J. M. Toner, of Washington, Chairman.

Committee on Publication.—Dr. W. B. Atkinson, of Philadelphia, Chairman.

The Association adjourned to meet next year at Cleveland, Ohio.

WEST VIRGINIA STATE MEDICAL SOCIETY.—This organization held its annual meeting for the present year at Wheeling, beginning its session in the capital building May 24. Dr. James E. Reeves called the meeting to order. Dr. Geo. Baird delivered an address of welcome. The speaker spoke quite favorably of the working of the law passed over a year ago by the Legislature of the State of West Virginia. He said that many ignorant pretenders had been compelled to gather up their effects and go elsewhere. In the evening of the first day, Dr. Reeves, the President, delivered his address. It was quite an able one throughout, but we have not space to make more than a few quotations. Among a number of topics embraced in the address, *Medical Progress* received attention, and from that division we will make some quotations:

“When, before our day, had we such definite and demonstrable views of digestion, reproduction, general absorption, the functions of the senses and motility? Or so clear a knowledge of the composition, the chemical and vital properties of the blood and other animal fluids, and of the agents which modify them by being introduced from without, as at the present day? If all that was pictured and written of the brain and nervous system, anterior to the present century were lost, we should still be in possession of every essential starting point connected with productive knowledge of their structure and function.

“Pathology, like physiology, has received a rich harvest of illustration from the microscope. The contributions to the various tissues are so varied, that the science of general anatomy has, within a comparatively short period, assumed a new and more important aspect. There is no class of organs which has not been most carefully investigated and the knowledge on the subject greatly improved by the employment of the microscope, aided by minute injection and comparative anatomy. Our knowledge of Cancer and the so-called malignant diseases, and of urinary and renal diseases, has been greatly advanced by aid of the microscope. Indeed, I am very sincere when I declare that if from any cause I were deprived of the aid afforded me in general practice by the use of this instrument, there are some diseases in the urinary and renal group I should decline to treat; for without such aid and direction my treatment of the cases to which I refer would be the merest guess-work. Take Bright’s disease, and how shall we discover its essential characters, mark its varieties and progress without the aid of the microscope? In scores of instances this wonderful instrument is absolutely indispensable in discovering the exact nature and successful treatment of disease. How valuable, indeed! yet it is within the reach of all who engage in the study and practice of medicine. A good achromatic microscope and a well assorted collection of injected mounted specimens—normal and pathological—all of which may be purchased for less than two hundred dollars, will convey to the student, in a few months’ course of study, a better knowledge of the human organization and the changes that take place in diseases than he can possibly obtain from books alone in as many years. Just

now the whole medical world is electrified by the light of the microscope in the hands of a young German physician, Dr. Koch, of Berlin. Having repeated Pasteur's culture-experiments of the *bacillus*, which causes Splenic Fever, by the same method of study and experiment, he discovered the *tubercle bacillus*, a rod-shaped microscopic organism or parasite, in the centre of the tubercle cell, and which, it has been confidently asserted, is the disease-producing agent of *tuberculosis*. Stimulated by the discoveries of Pasteur and Koch, hundreds of painstaking investigators are, no doubt, already at work; and all humanity waits with anxious hopes for the announcement of the solution of the problem so long regarded as insoluble—the cure of tuberculosis.

"But these are not all of the advances that have marked and distinguished the industry of the present age. In surgery there is the attainment of great ends by simple means and without pain or deformity—its almost limitless resources and possibilities—its crowning glory and priceless benefits having been conferred on woman. In *Materia Medica* and *Therapeutics*, philosophical accuracy and scientific relations mark the present; and though still far from resting on a stable basis, their tendencies and activities are hopefully moving in the direction of "Certainty in Medicine." In *Obstetrics*, the literature of the present time will contrast most advantageously with that of all former periods. While we may not rightfully restrict systematic Midwifery to the present age, yet it is a fact that the mechanism of labor, the series of expulsive movements to which the child is subjected in parturition, the fitting time and best means of mechanical aid in the different positions and presentations of the child, and the stages of labor, almost entirely belong to contemporary literature. And it may justly be further claimed that much of the *tact* calculated materially to accelerate the progress of labor and save the mother much suffering, has been put forth in the present age; and as in every other department of the profession, our countrymen are in the front rank of progress, if not always in the lead.

"The departments of Clinical Medicine, Psychology, and Sanitary Science have shown a not less encouraging measure of advancement."

The following action was taken by the Society expressive of its views of the change made of the Code of

Ethics by the New York State Medical Society. It was offered by Dr. Lazell:

Resolved, That the sum of \$25 be appropriated for the janitor for his efficient services as such.

Resolved, That the thanks of the Society be tendered to the Press of the city of Wheeling for the many favors extended.

A resolution by Dr. Lazell was unanimously adopted as follows:

WHEREAS, the action of the New York State Medical Society at Albany recently, in changing the historic code of ethics of the American Medical Association, requires some notice from this Society; therefore,

Resolved, That the West Virginia State Medical instructs its delegates to the aforesaid National Association, which meets at St. Paul on June 6th, to stand by and defend an ancient and honorable code of ethics.

Resolved, That the Secretary be required to forward a copy of this resolution to the permanent Secretary at St. Paul.

A resolution by Dr. Jepson was adopted as follows:

Resolved, That the Committee on Publication is hereby directed to append to the next volume of Transactions an index to all the printed Transactions since 1874.

AMERICAN ACADEMY OF MEDICINE.—We have mentioned this Society frequently in the MEDICAL NEWS since it was organized. It holds a regular meeting biennially in the city of New York on the third Tuesday of September, and one also in the intermediate year, at some place determined upon at the previous regular meeting.

It now numbers about 160 members, all of whom reside east of the Allegheny Mountains except about seventeen or eighteen. Among the members we notice the names of Drs. Frank H. Hamilton, St. John Roosa, Traill Green, Geo. F. Schrady, J. C. Thomas, Wm. Elmer, Fred. D. Lente, Henry J. Bowditch, J. S. Billings, Geo. M. Beard, Wm. B. Atkinson, W. H. Pancoast, Nathan Allen, Theophilus Parvin, C. C. Lee, etc., and other well known and eminent physicians. We have not attempted to select only the most distinguished of the list, but have chosen those whose names came the most readily under our eye. An examination shows that the members, so far as their number extends, embrace, with but few exceptions, the most

eminent men of the profession of the country. The venerable professor of Jefferson Medical College, Prof. Samuel D. Gross, is an honorary member, as also Prof. D. Hayes Agnew.

The objects of the Society, as stated in Article II. of the Constitution, are, 1st, to bring those who are alumni of Classical, Scientific, and Medical Schools, into closer relations with each other; 2nd, to encourage young men to pursue regular courses of study in classical and scientific institutions before entering upon the study of medicine; 3rd, to extend the bounds of medical science, to elevate the profession, to relieve human suffering, and to prevent disease.

In describing the qualifications of members, Article III. of the Constitution says: "The Fellows shall be alumni of respectable institutions of learning, having received therefrom: 1st. The degree of Bachelor of Arts or Master of Arts, after a systematic course of study, preparatory and collegiate; 2nd. The degree of Doctor of Medicine, after a regular course of study, not less than three years, under the direction and instruction of preceptors and professors."

An Eastern medical journal, the *Medical Record* we believe, in the way of speaking disparagingly of the profession of the West, says that only some eight or nine Western physicians are members of the Academy. On looking over the list of members we find that there are about double that number residing west of the Allegheny Mountains that are members. But though there are a score of gentlemen in the West belonging to the organization, we are really astonished at their fewness. It is not because there are so very few who possess the required qualifications, so far as being graduates of literary colleges, and having received therefrom the degrees of A. B. and A. M., for we are personally acquainted with a great many physicians in the West who are thus qualified. We can count twenty in Cincinnati alone, and there are undoubtedly many others; and yet there are in this city only two members of the Academy.

The reason, probably, of so few physicians in the West joining the Academy is because it has been so little brought to their attention. Not a few, we have reason to believe, have never heard of it, while there are many who have but slight knowledge of its objects—some supposing

it to be only a new medical society having the usual features of such an organization, and nothing more. Some conjecture it to be in some way in opposition to the American Medical Association—having understood that the latter had become too democratic to suit a good many.

We consider it unfortunate that members of the profession in the West are not better acquainted with the objects of the *American Academy of Medicine*, and do not take more interest in it. Its success will undoubtedly do much in elevating the profession. Young men contemplating becoming members of the profession, on seeing that the men of learning of the profession are fellows of it, and that membership of it implies learning, and not to be a member would give the impression that a physician was deficient in education, would be stimulated to so extend their education that, on graduating in medicine, they might be qualified to become fellows. Less than half a century ago there was not the demand on the part of the public, as now, that practitioners of medicine should be graduates of medical colleges, and the consequence was that very many never graduated. Among them were many who became eminent. But, now, this demand is so general, that there are but few, who enter upon the study of medicine, that do not continue right on until they have received a diploma, even in those States in which the possession of a diploma is not a legal requirement. So we believe a similar result would, to a great extent, follow if there should be a general demand, as it were, that physicians, in addition to holding diplomas, should be fellows of some society of learning. Young aspirants of medical honors, recognizing the necessity of certain qualifications in education in order to possess a required standing in the profession, under pressure of the demand, would go about to obtain the qualifications. In other words, those contemplating the study of medicine, knowing that they must have a collegiate education in order to secure the confidence of the public, would first proceed to obtain such, or, not succeeding, would abandon it.

Of course, there is no intention to disparage those physicians, many of whom have obtained an enviable distinction in the profession, who do not happen to have any literary degree. Such have made their ability manifest, and no degree would add to their standing. But as the mental discipline secured by a scientific and classical education un-

doubtedly qualifies for the study of medicine, and as the medical profession is overrun by men who are without any intellectual endowments to be physicians, every practitioner of medicine, having the welfare of the profession at heart, can not help but sympathize with any movement that tends to elevate by driving away from it all incompetent persons seeking to enter it. How better can this be done than by increasing the requirements to enter it?

We believe it to be the duty of every one having the qualifications to become fellows of the American Academy of Medicine to do so, and this they can do without exciting the jealousy of those who do not happen to be able to fulfill the requirements themselves, but are worthy physicians and are anxious for the advancement of the profession which they honor.

THE OHIO STATE MEDICAL SOCIETY met June 13, at Columbus, Dr. Starling Loving presiding. Dr. Loving made an address of welcome, expressing his thanks for the position conferred upon him.

Dr. H. G. Landis read a paper on the "Progress of Obstetrics and Gynecology;" Dr. R. A. Vance read a paper on the "Surgery of the Arteries," and Dr. D. N. Kinsman a paper on the "Etiology of Consumption." Each of the papers was in turn discussed by the members.

In the evening Prof. Edward Orton, of the Ohio State University, delivered a lecture on the "Relation of the State to Public Health." The Society, at its conclusion, ordered the publication of one thousand extra copies.

Wednesday morning papers were read by Drs. N. P. Dandridge, P. S. Conner, and Sidney Norton.

In the afternoon amendments to the Constitution were adopted, and, strange to say, without an anticipated wrangle. Papers were read by Drs. S. C. Ayres, W. H. Mussey, and Philip Zenner. The papers were all fully discussed.

The election of officers for the ensuing year and the appointment of committees took place at two o'clock.

Dr. C. P. Landon, of Westerville, was elected President, and Dr. Geo. A. Collamore, of Toledo, Secretary, after which the President delivered his annual address.

Wednesday evening the members of the Society were handsomely entertained at the Deaf and Dumb Asylum,

where, after being shown through the institution, which, by the way, is one of Ohio's noblest State charities, and in its management and excellent government every citizen may take a laudable pride, the Association was gathered in the chapel, where an unique entertainment of music and pantomime greeted their eyes and ears; Dr. J. R. Black, of Newark, delivered an admirable lecture on "Preventable Diseases," after which the members were invited to an elegant collation spread for their benefit in the dining hall.

Papers sufficient to occupy the entire time of the Society for the succeeding day were announced.

All in all, the meeting was one of the most profitable in the history of the Society, very much of which was due to the admirable executive skill displayed by the presiding officer, Dr. Loving, and the gathering and putting the business in shape by Dr. Baldwin, the efficient Secretary of the Society during the past four years.

THE NEW CODE OF ETHICS OF THE NEW YORK STATE MEDICAL SOCIETY.—The American Medical Association, at its late meeting at St. Paul, Minn., "sat down upon" the new Code of Ethics of our New York brethren by refusing seats in the Association to delegates from the New York State Medical Society. The following is the action:

"In regard to the protest against the receiving of delegates from the New York State Medical Society, which was referred to us, the Judicial Council decide as follows:

"Having carefully examined the Code of Ethics adopted by the New York State Medical Society at its annual meeting in February, 1882, as furnished us by the Secretary of said Society, the Judicial Council find in said Code provisions essentially differing from and in conflict with the Code of Ethics of this Association, and therefore, in accordance with provision of Rule 9 of the By-laws of this Association, decide unanimously that the said New York Society is not entitled to delegates in the American Medical Association.

"This report was received with long continued applause."

Previous to this action, the Secretary read protests against the admission of the delegates from the State of New York, received from the St. Louis Medical Society, the Georgia State Medical Society, Medical Society of the

State of Pennsylvania, the Philadelphia County Medical Society, the Indiana State Medical Society, the Medical Society of the District of Columbia, the Grant County Medical Society of Indiana, the Esculapian Medical Society of the Wabash Valley, the State Medical Society of Arkansas, the State Medical Societies of Kentucky, Tennessee and Missouri.

The Secretary also read letters from Dr. Lewis A. Sayre and Dr. S. D. Gross, expressing in emphatic terms dissent from the action of the Medical Society of the State of New York, concerning the code of medical ethics, and asking that the Association take no uncertain action upon the question.

Dr. Sayre's letter was addressed to the Secretary of the Medical Society of the State of New York, declining to act as delegate from that Society to the American Medical Association, because the Society had ignored the code of medical ethics which binds them as members of the Association, and therefore they must necessarily be refused admittance.

Dr. Gross in his letter expressed deep regret that he would be unavoidably prevented from participating in the deliberations of the Association. He regarded "the late extraordinary proceedings of the Medical Society of the State of New York as an outrage which every member of the profession should consider as a deep personal insult and which the Association should rebuke in the most stern and uncompromising manner."

THE MEDICAL RECORD ON THE NEW YORK MEDICAL CODE OF ETHICS.—The *Medical Record*, of May 27th, has a lengthy editorial apologizing for the new code of ethics of the New York State Medical Society. The reasoning of the editor is quite ingenious if not ingenuous, in many respects.

It will be remembered that the new code has an article as follows: "Members of the Medical Society of the State of New York, and of the medical societies in affiliation with it, may meet in consultation legally qualified practitioners of medicine."

This provision of the new code has been considered by every one as removing all restraints from the members of the State Society of New York, and of the medical societies in connection with it, so far as a written code can

do it, of consulting with Homœopathists, Eclectics, etc.; and, so far as affecting that body of the profession is concerned, of virtually repealing the Code of Ethics of the American Medical Association. The large majority of the medical journals have censured it, and not a few medical societies in different portions of the country have passed resolutions strongly condemning it, in consequence of taking this view of the provision. But will not all these open wide their eyes and wonder how stupid they have been on reading the following taken from the article of the *Record* referred to?

"The opponents of the new Code make a mistake in supposing that instrument to be in any manner an apology for homœopathy, eclecticism, or any other form of error. Its advocates are firm in the faith of the so-called "old school." They are as jealous of the fair fame of the profession as their critics, and have done, to say the least, as much as they to advance its true glory. The ignoble charge that they are actuated by mercenary motives and hanker after the pecuniary benefit which consultations with "irregulars" would bring, is too childish and flimsy to need refutation. So far as we know them, and we think our opportunities for knowledge are certainly as ample as those of outsiders, they are men of the highest probity and all in a position to be free from such mean and groveling propensities. To allege that the Code is in the interest of the specialists, and that they desire to have license in the matter of consultations and to be afforded scope to violate even the restraints of common professional decency, is absolutely groundless. The specialists among us have been made such by the action of their professional brethren. They have not arbitrarily assumed the position. They are, with scarcely an exception, men of broad medical culture, possessing the attributes of honorable professional workers, and their special knowledge or skill in addition. They have always been loyal to the American Code, and, if properly understood, are still so. They have been foremost in everything relating to the honor and advancement of the profession, and show a proper public spirit in everything that has affected the progress and dignity of their calling."

DR. HAMMOND'S PAPER.—Dr. Hammond recently read a paper before the New York Medico-Legal Society on a

form of insanity with which he considers that the assassin Guiteau is affected. While the Doctor regards the individual suffering from such a mental affection as really insane—at least we have been informed that such is the fact—yet he does not believe him to be rendered irresponsible. The following, we learn, is a synopsis of the definition:

“Although it is scarcely possible that so well marked a mental disorder could have escaped the notice of the earlier observers, no distinct account of it appeared till Pinel, in 1801, published the first edition of his remarkable work. Under the head of “Mania without Delirium” he gave excellent accounts of several cases, and then, in a few words, summed up his description of the affection. “It may,” he says, “be continuous or characterized by the occurrence of periodical accessions. There is no marked change in the functions of the understanding, the perception, the judgment, the imagination, the memory, etc., but perversion of the emotional faculties and blind impulses to the perpetration of acts of violence, or even of sanguinary fury, without its being possible to recognize the existence of any dominant idea or any illusion of the imagination to which the acts in question can be ascribed.” Yet, although Pinel had some idea of the affection under consideration, he did not have a very exact conception of it. He seemed to be under the impression that a tendency to the perpetration of unwarrantable acts of violence is its most marked feature, whereas we know very well that such acts are often done by its subjects after very thorough deliberation and from what are deemed ample motives.

“I wish to present at the beginning some idea of the characteristics of reasoning mania, as well as to show that such a mental disorder is well recognized by medico-psychological writers. I have confined my citations to French writers, for the reason that the affection was first differentiated by alienists of that country; but I might have drawn fully as largely from English and German writers. Indeed Prichard, Connolly, Bucknill and Maudsley among the former, and Hoffbauer, Casper, Griesinger, Liman, and Kraftebing, and others of the latter, have written quite as strongly in support of the actuality of the affection in question as those I have cited. In this

country the most distinguished authority in the affirmative is Dr. Isaac Ray.

"Before proceeding to the consideration of the medico-legal relations of reasoning mania, it is well to give a somewhat systematic description of the affection as it has been portrayed by others and as I have observed it in my own experience. The most prominent characteristic of the disease is an overbearing egotism which shows itself on all, even the most unimportant occasions. The individual without social position, without wealth and without political influence, conceives that he has only to make his wishes known to those in authority to have them granted. He does not hesitate to push himself forward as an applicant for high office, and this when he has no one qualification fitting him for the position he seeks; refusals do not dismay him; the most pointed rebuffs do not abash him. He is sure that his application will be favorably considered, and any little act of common politeness that may be shown him is at once construed into a promise of assistance. He is invariably sure his appointment is about to be made, and when, as always happens, some other person is selected, his chagrin is of short duration. He has some plausible excuse for his failure, and at once directs all his energies towards another and perhaps still higher position.

"It may be said that these are the characteristics of all office-seekers, but this I emphatically deny. We have in this country ample opportunity to study the natural history of the class in question, and I think all who hear me will bear me out in the assertion that it is the rarest thing in the world to find a person applying for an office for which he is totally unfit, and for which he could not obtain the indorsement of any intelligent person.

"Not long since a young man was under my professional charge who for several years had been a source of great anxiety to his friends on account of his vagaries and general impracticability. His father had a large shoe factory, and the attempt was made to instruct him in the details of the business. It was found, however, impossible to make him give his attention to the subject. He was firmly convinced that Nature intended him for something better than a shoemaker, and he destroyed a good deal of valuable property, leather, tools, etc., in order to induce his father to abandon the project. Finally he succeeded.

He had received a tolerably good education in the branches usually taught in the public schools, and was, moreover, exceedingly quick in his perceptions of things which he desired to understand. As he told me the story of what he considered to be the wrong done him by his father in trying to make a shoemaker of him, he reasoned with great plausibility, and tears came into his eyes as he detailed the story of the indignity which had been attempted to be put upon him. "The fact is," said he, "that when I went to school I paid great attention to the study of languages. Now, if I had known that I was going to be a shoemaker I would have turned my attention to the study of the human foot, and then I should have been qualified to make the best shoes this country has ever seen. I have thought over the matter, and to-morrow I am going to Washington to ask the President to appoint me a Commissioner of Emigration, and send me to all the nations of Europe to see after the emigrants and instruct them in their duties as American citizens. I shall give lectures on the subject in all the principal cities of Great Britain, France, and Germany."

THE OPIUM HABIT SUCCESSFULLY TREATED BY AVENA SATIVA.—Dr. E. H. M. Sell, of New York, read a paper at the last meeting of the N. Y. State Medical Society, in which he relates a number of cases successfully treated by the administration of the concentrated tincture of *avena sativa*. After experimenting with the remedy for some time he attributed to it the following properties: "*Diuretic, slightly laxative, tonic, stimulant, but especially nerve stimulant.*" He found it to exert a most powerful influence upon and through the nervous system.

Dr. Sell states that it is an excellent substitute for intoxicating drinks, and will, in many cases, cure inebriety, provided the patient can be kept from his old associates. Nervous headache and prostration due to mental strain or worry, are easily brought under its curative effect. It is not a narcotic, yet it readily relieves many cases of insomnia. Some of the worst cases of neuralgia, including those forms so common in patients who suffer from hemiplegia, have been cured by this remedy.

One of the cases reported of relief from the habitual use of morphine or opium is that of a middle-aged lady who had been using morphine, twelve grains daily, for

seven years. Opium or morphine had been prescribed for her by physicians for pains in different parts of the body, and also for affection of the bowels. Whenever she would consult a physician for her ailments these medicines would invariably be given, until the habit of using morphine became fixed. To free herself from it seemed impossible. All the so-called specialists were consulted without effect—rather to her injury, for, as is well known, all of their preparations contain morphine or some preparation of opium. It is mentioned of her having paid a Dr. B. eighty dollars, whose dirty-looking preparation containing some alkaloid of opium she took for four months without the slightest benefit. Coming under the care of Dr. Sell, who treated her for her other ailments and gave her *avena* for her morphine habit. Six months afterwards she wrote him: "I have not taken a particle of morphine or anything of the kind since the first day I saw you. The *nervine* (*avena*) took the place of the morphine, making me comfortable and keeping my nerves quiet. At the end of two weeks I got along nicely without the *nervine*. I have not been so well for ten years. I weigh twenty-five pounds more than ever I did. I can hardly realize I have not taken any morphine for six months."

Dr. Sell relates other cases, one of them quite a remarkable one, but we have not the space for further accounts.

We infer from the report of the cases treated that the doses of the concentrated tincture of *avena sativa* is from six to thirty drops several times a day. An average dose is fifteen drops, as frequently per diem as the patient has been in the habit of taking morphine or opium. If there should be wakefulness at night, attended with much nervous prostration, the dose should be increased as far as is necessary. When given in *hot* water its action is almost immediate. A fulness at the base of the brain will indicate that the dose dare not be increased, and a pain in that region suggests that an overdose has been given.

Avena sativa is common oats, a staple cereal raised on all the farms of the country. The concentrated tincture *avena* is made by dissolving the *active principle* in alcohol. The *active principle* is obtained by treating the oats with alcohol, then distilling off the alcohol, leaving

an impure extract. The extract is then treated by appropriate reagents.

B. Keith & Co., of 41 Liberty Street, New York, have for many years made a specialty of concentrated tinctures, and manufacture the concentrated tincture avena; but, we presume, many other pharmacists do also. B. Keith & Co. have no trade mark connected with any of their concentrated tinctures; so, therefore, there is nothing of the nostrum in the remedy mentioned.

We hope our readers will make trial of the concentrated tincture avena sativa as to its effects in affording relief in patients subject to the constant use of opium or morphine, and report results.

PARKE, DAVIS & CO. AND THE TRADE MARK RING.—Several months ago we noticed the fact that a medical journal called the *New England Medical Monthly*, in an article written by a Dr. Bigelow, of Washington, charged that Parke, Davis & Co., of Detroit, endeavored to bribe the members of the American Medical Association meeting at Richmond, Va., by drinks and cigars, to take certain action, which they desired. We are glad to announce that this attempt to fasten such an infamous charge has signally failed. It is an insult to the profession thus to give out that any man or class of men, making any pretense to respectability, would dare attempt to thus cheaply buy up the members of the leading medical society of the country. We are confident that those who are acquainted with the house of Messrs. Parke, Davis & Co. would not believe that they would be guilty of employing dishonorable means to advance their interests if they could. They certainly have too high respect for the members of the medical profession to endeavor to buy them by such means as drinks and cigars. Men who have made their house a leading one by the merits of their preparations will not stoop to such conduct.

CONSOLING.—So long as man has to die, but wants to live, the physician will be abused—but employed.—*La Bruyere*.

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ORIGINAL CONTRIBUTIONS.

Early Mental Culture.

BY J. H. COX, M. D., WEST LIBERTY, W. VA.

IN building up the great and complicated fabric of man, it has been considered important to preserve a due proportion and balance of the elements of which he is formed. Particularly he must not have an undue proportion of brain matter or it will become diseased, and if we commence its culture too early it will grow too fast for the rest of the body and result disastrously. It has been a question, the importance of which can not be over-estimated in view of the proper and safe development of the mind, when we shall commence the child's education and how we shall proceed therewith. Within the last twenty or thirty years in this country public opinion and our system of education have made great revolutions, so that now a child ten years old has frequently accomplished more, and with less labor, than was formerly accomplished by a youth of eighteen years.

To us, as physicians, this early training presents itself in a physiological point of view, and if we divest ourselves of old ideas and inquire if it is injurious, we shall probably arrive at the conclusion that it is not. We shall find that it is by proper nourishment and use, with increasing burdens from day to day, that all our organs gather strength and acquire power to perform the greatest service and to resist most successfully the attacks of disease. It has never been proven that persons of great mental culture and brain power were more subject to

cephalic disease than other people. If we visit our asylums, where those have been congregated together whose mental powers have broken down, we find them mostly of the ignorant and of the lower walks of life, and not so many of those whose brains have been put to the severest test of systematic mental training.

In the consideration of this subject we should distinguish between early scientific culture and development and overtaxing the brains of the young by compelling them to study difficult and abstruse subjects, for which they are not prepared, or whipping jaded nature along when rest is required—this is not to be termed early mental training, but a *blunting* and *paralyzing* of the mental faculties.

Suppose we take a child at an early period, when it first commences to lisp its words, in imitation of the sounds it has heard. While amusing it on our knees, we take a picture-book and pointing out the various forms of animals, we tell it: This is a dog. This is a cat. And pointing to the letters, we say: This is d-o-g, dog. And this is c-a-t, cat. In this way we may soon present a great number of pictures, and the child, before it can speak the words, in its glee will point them out with its little fingers as they are called. It will also soon be able to point out each letter and word as they are called, and as it learns to speak it learns to read. In the same manner, at an early period, we may commence teaching it the value of figures by illustrations—the names of different forms of leaves, and in this way form the basis of an education.

Now, the question arises, is this early training and culture injurious? and must the child be treated for a number of years with nauseous baby-talk before it is trained to speak correctly, and put in possession of knowledge that must form a part of a useful education? We contend that it is not injurious, but healthful, and that it would be just as philosophical to tie down an arm or a leg for seven or eight years, and wait for it to gain vigor and strength before it is used, as to tie down the mind and neglect its early cultivation and development.

The parents should be the child's teacher in its early years. As they would attend a tender plant, and prevent every influence injurious to its growth, so should they attend to its mental and physical being. As they learn it to talk they should so speak that in after years it will

not have to try to forget their words to learn them correctly. We have often been disgusted and have seen children's understandings insulted by Sunday-school teachers and clergymen trying to talk baby-talk to them. They should be taught in a manly and scholarly way, worthy of their imitation; and those who attempt to reduce their styles to that of children often fall beneath them.

There are always things to amuse the little ones that will also increase their useful knowledge. There is no period of life at which there is a greater hunger for knowledge than in childhood, and it only requires to be made pleasant for them to acquire it. Though their never ceasing questions may sometimes disturb our meditations we should never turn to them a deaf ear, but encourage them to ask concerning every thing they wish to know or fail to understand. And, instead of confining the child to the school-room in an unhealthy atmosphere and amidst other bad influences to learn to read, it should be taught so early, and its lessons so incorporated with its pleasures, that in after life it can not name a period at which it commenced to read. Its interest should be excited and encouraged, and its footsteps led along the path of science so gently and every obstacle so removed that its progress will be a continued course of pleasure.

The question arises, what helps should the child and the older student have? We answer, all that can be brought to their assistance. Suppose the child has arrived at a period at which it is necessary for him to go to school. The teacher assigns him the duty of writing an essay—assigns him a subject, and tells him that he must have no assistance, he must write it himself. He returns to his home and looks at his subject. He knows but little about it and does not know what to write. He worries over it for many hours, and perhaps gets a few disconnected sentences written, and, conscious that it is a failure, he hands it in to his teacher. This is what is sometimes called *learning the pupil to think—disciplining the mind*. This plan is pursued until the student gets well along in his course of study—when he learns that which his teacher might have given him the benefit of at the commencement. Why not at first tell him how he should treat his subject? How he ought to divide it—how he ought to commence it—how he ought to close it—how he

ought to construct and word his sentences—and, finally, how he ought to punctuate. Had *we* had this assistance it would have saved us many a headache and many a lost hour, and we would have written better to-day. And, when we were students, had we been found with a key, or a translation in our possession, we would have been subjected to a very severe reprimand. These things are only helps—they act, to some extent, as a teacher ever present to solve our difficulties, and by them the student may economize his time and save labor spent to no purpose. They take away the dullness and dreariness of many hours, and much of the distasteful parts of the labor in acquiring our educations; and the question whether we shall have such helps amounts to this: Shall we have an instructor, a teacher, or shall we, through long years of labor, be compelled to dig out our own knowledge, without taking advantage of the labors of others who have gone before us?

On investigation we will find that those who have commenced their mental training earliest and who have received the greatest assistance (the texture of their brains being equal), have ascended highest in the scale of mental development, and have plucked the grandest laurels from the temple of fame.

Muscular Contractility.

BY JACOB REDDING, M. D., FALMOUTH, IND.

NOTWITHSTANDING the remarkable progress that has been made in physiology during the last half of the present century, we are still left in comparative darkness with regard to the source of the impulse by the exercise of which the phenomena of muscular movements are produced. Indeed, the only substantial lesson taught in medical literature on this subject is one with which almost every school child is familiar, namely: Muscular tissue has the property of becoming shorter in the direction of its greatest length, under the influence of an exciting cause, and of returning to its former state when such influence is withdrawn, and that they may retain this property for some hours after co-ordinate vitality has ceased.

Now the question presents itself, can it be possible that

the force, or forces, which determine muscular movements are of such an extremely subtle nature, or their manifestations so exceedingly peculiar and complex in character, as to completely elude the grasp of the finite mind?

Dr. Beale states, in his work on Bioplasm, that "no phenomena has been discovered in connection with the action of any of the tissues already considered, which at all resembles that which is the peculiar characteristic of muscle. In both muscle and nerve molecular changes, remarkable for their rapidity and repetition, take place, the exact nature of which is still doubtful." And again, "the phenomena of contractility characteristic of this class of tissue is therefore probably due to changes in non-living formed material only, and is not 'in any way dependent upon bioplasm.'"

I am certainly a most ardent admirer of Dr. Beale; nevertheless, after careful and repeated examinations of both living and dead muscle, also of bioplasm living and dead, confined and unconfined, limited and unlimited in its movements, I am forced to the conclusion that every muscular contraction is directly dependent upon active and forcible changes taking place in confined bioplasm; and, secondly, that muscular relaxation is dependent upon the flexible property of its formed material and passive changes occurring in living matter. Indeed, upon this hypothesis, and upon no other, can the occurrence of increased temperature after co-ordinate vitality has ceased, the occurrence of *rigor mortis* and all the peculiar phenomena connected therewith, as well as every other phenomenon connected with the muscular system, be satisfactorily and rationally explained.

It is stated that the movements of muscular tissue as regards direction, extent and place are limited, and are determined by external forces, and that, therefore, these movements are essentially different from the movements of living matter, and can not be classed together, since the movements of bioplasm result from the operation of "forces acting from within the matter itself;" nevertheless, we could, were it thought necessary, or even desirable, conclusively show that the phenomena of muscular movements do not harmonize with the ordinary operations of any one or more of the physical forces; that such an hypothesis fails to explain the differences existing

between the warm-blooded and cold-blooded animals as regards the length of time during which they may respectively retain muscular irritability after respiration and circulation have ceased. It fails to explain what is really implied by the term "irritability;" it fails to explain the difference between the voluntary and involuntary muscular tissue, whereby the former is enabled to contract quickly, under an exciting influence, while the latter, under precisely the same influence, contracts so much more slowly.

In short, such an hypothesis fails to satisfactorily explain any of the many phenomena connected with muscular movements, either during life, or after co-ordinate vitality has ceased. The chemical theory (which was formerly held in high esteem) would involve such a rapid structural disintegration and tissue formation as to not only astonish the world, but even Him who spoke it into existence.

In order that we may clearly comprehend what follows, it will be necessary that we briefly inquire into the histological conformation of muscle.

We shall find then that the non-striated muscle cell is fusiform in shape, of transparent, refracting and amorphous formed material, and containing in its interior, at the point of its greatest diameter, an elongated or rod-shaped nucleus, or bioplast. These cells are so united that the body of one is received between the attenuated extremities of its four neighboring cells, thus forming fasciculi, or membranes. This description is equally applicable to the non-striated muscle of the warm or the cold-blooded animal. Hence, "anatomical structure and constitution" being precisely the same, we are of necessity forced to attribute the remarkable difference in the length of time during which they respectively retain muscular irritability after respiration and circulation have ceased, to some other principle, condition or influence.

A microscopical examination of striated muscle reveals the same identity of "anatomical structure and constitution" that was found to obtain in the former case, and hence the same remarks hold good as to it.

Unfortunately, however, histologists have been content with a superficial view of striated muscle cell, and have, therefore, come to the erroneous conclusion that these

cells consist of *anatomical* structure only, and hence that they were devoid of a *constitution*.

I shall endeavor to show, however, that each and every individual striated muscle cell does possess a living, moving, interior *constitution*; and, secondly, that herein lies the force, which is the source of the impulse by and through which the phenomena of muscular contractions are produced.

Voluntary muscle, then, consists, in its anatomical structure, of bundles of minute fibrillæ, enclosed in a membraneous sheath—called the sarcolemma. The fibrillæ are composed of cells, averaging about one twelve-thousandth of an inch in length, and one eighteen-thousandth of an inch in their transverse diameters, and joined end to end in a minute filament of variable length. It is by virtue of the union of these cells, end to end, that the transverse striation is produced, while the longitudinal marking results from the immediate juxtaposition of the ultimate fibrillæ themselves.

Thus far all are agreed; but what of the interior of these cells? Authors have completely ignored, or, at least, have remained silent upon this subject. And yet I think I am able to establish beyond the power of successful contradiction, that the outer formed material, of perhaps fibrous character, the cell wall, does contain in an anterior space a transparent, colorless, structureless, semi-fluid substance, which possesses all the properties of living matter; and that it is, by virtue of a change in form, taking place in this living matter that muscular contractions are produced.

Analogy teaches us that such is the case; for every organic cell, every anatomical unit, so to speak, is found upon investigation to contain a greater or less amount of bioplasm within its interior, so long as they are capable of performing an active function, or, in other words, unless they have undergone complete dessication. The epithelia, the endothelia, the non-striated muscle cells, the fat vessicles, all contain living matter in an interior space, and this has been dislodged in some instances, and has then been observed to undergo all the varied and peculiar movements characteristic of unconfined bioplasm. Moreover, there is no tissue or organ of the body, except the lungs, and, perhaps, the depurative organs, that is more richly supplied with blood capillaries—certainly a

most anomalous arrangement, if the striated muscle cells are entirely devoid of living matter, which alone of all things in nature is capable of being nourished.

Again, the statement by Dr. Beale, namely; "This contractile fiber, perhaps, consists of a passive basic substance of a fibrous character, through which is diffused a soft material, prone to move in directions at right angles to one another, according to the manner in which external forces operate upon it;" and again, "The changing substance upon which the alteration depends can be expressed from the muscular tissue, and coagulates spontaneously like the fibrin of blood," is certainly very strong corroborative evidence of its bioplastic nature, since he has conclusively shown that "it is upon this material (bioplasm) that the coagulable property of the blood is mainly dependent, and it is this which, in great part, undergoes conversion into what we call fibrin when the blood is removed from the living vessels, or dies.

It is evident, then, that the material which is susceptible of being expressed from muscular tissue, and which has the property of undergoing spontaneous coagulation, thus being transformed into fibrin, can not be other than living matter. It is susceptible of being deeply colored with the carmine-staining fluid after expression, and no doubt it could just as readily be discriminated in this way, *in situ*, had not the formed material, of which the cell wall is composed, an *alkaline reaction*.

But, be this as it may, its nature is made evident; and as it is hardly probable that the bioplasm should, contrary to the universal rule elsewhere, be diffused throughout the substance of striated muscle, it follows, as a logical sequence, that it is collected in minute particles in an interior space in the anatomical structure of each cell.

Experimental histologists have shown that the irritant qualities of both acid and alkaline solutions, when caused gradually to come in contact with ciliated epithelium, instantly excite the slowly moving cilia, and cause them to "vigorously lash the liquid into which they project; but the effect is soon exhausted, for the alkaline liquid penetrating the cells destroys their vitality, and the motion of their cilia stops beyond recovery." These agents have the property of exciting muscular contractions also, so long as they retain their irritability; but the experiment

proves fatal to a repetition of the phenomenon, as in the case just cited, and, as I take it, for precisely the same reason. It is generally conceded that the cilia vibrate in obedience to the confined or limited movements of the contained bioplasm. Analogy teaches us that the phenomena of muscular contractions are due to the presence of, and changes in, living matter within an interior space in the formed material of the striated as well as the non-striated muscle cells.

We might adduce much more testimony of the same character in support of the anatomical constitution of the striated muscle cell, such as I have described, but, as we are in possession of evidence of a different nature, but of like import, it will be best, perhaps, to take up the latter.

Physiologists tell us that the "*irritability of muscle* depends directly upon its anatomical structure and constitution," and for that reason "muscular irritability lasts longer after death in cold-blooded than in the warm-blooded animals." Now, every one at all familiar with the use of the microscope knows full well that it can be, and has frequently been, ocularly demonstrated that the bioplasm of a cold-blooded animal will live for hours, and in some cases even for a day, at a temperature so low that the bioplasm of man would almost instantly cease its vital movements, assume the spherical form, and, unless the conditions suitable to its continued vital existence are quickly rendered more favorable, die. Seeing, therefore, that all muscular tissue which is actually dead is equally prone to undergo regressive changes, and that the conditions which are unfavorable to putrefaction, namely, a low temperature, are the very conditions which most frequently prove destructive of human bioplasm and of muscular irritability, after co-ordinate vitality has ceased, while under precisely the same atmospheric influences the cold-blooded animals retain their muscular irritability, we are led to believe that this difference is wholly dependent upon a difference in the power or capacity of different kinds of living matter to withstand adverse influences and the difference in the surrounding circumstances under which they normally exist. "These differences can not, therefore, be attributed to the properties of the elements, to physical forces, chemical affinities, or to characters which we can ascertain or estimate by phy-

sical examination; but they must be referred to a difference in power, which is inherited from pre-existing bioplasm, which we can not isolate, but which it would be quite unreasonable to ignore.

Reasoning *a priori*, then, we are again forced to adopt the view that the striated muscle cells do contain living matter within their anatomical structure, and that it is by virtue of its vital existence that muscular tissue retains the property of responding to various external influences for an indefinite period after respiration and circulation have ceased.

Moreover, we are able to bring ocular proof of the presence of bioplasm within the cells of striated muscle, as well as within those of smooth muscle.

Before doing so, however, it will be best to show that the living matter therein contained can and does act in such a way as to not only produce muscular contractions, but also that they experience such changes on the withdrawal of the exciting influence as will permit the muscle to return to its former state.

The striated muscle cells are found by actual measurement to be at least one-third more, and often greater still, in their longitudinal diameter than they are in their transverse diameter; it follows, therefore, that if the bioplasm within these cells can be caused to assume, or even approximate, the spherical form, the cells will necessarily be somewhat abridged in the direction of their greatest length, and at the same time increased in their transverse diameter. The aggregate result of such a change will be just what occurs during the act of muscular contraction.

That these cells do possess an individual activity, that each cell does approximate the spherical form, and that, too, independently of every other cell at the time of muscular contraction, is evident from the bead-like appearance which they then present.

You are all conversant with the fact, no doubt, that the *amæba*, the white blood corpuscle, yea, every and all kinds of bioplasm of which we have any practical knowledge, may be seen, even when in active movement, to instantly assume the spherical form when brought under the influence of the electrical current. Muscle quickly and forcibly contracts under the same influence, provided it has not lost its irritability.

If the proper precaution be taken, the experiment may be repeated a number of times, with perhaps the result of materially abridging the period of their vital existence. So may it, also, be repeated, in like manner, in the case of muscle, with constantly decreasing responsive power, until at last it becomes rigid in death.

Carbonic acid gas excites the naked bioplasts to more vigorous movements; but this soon ceases, however, and they assume the spherical form, and thus remain until putrefaction sets in, unless the precaution be taken to displace the CO_2 by substituting oxygen, as soon as the spherical form has been obtained. It induces exceedingly strong and vigorous contraction of the muscles, and is a favorite agent with many practitioners for the purpose of inducing premature action of the pregnant uterus. It is essential to a repetition of the experiment that the same precautions be taken as above.

Many agents possess the property of exciting naked bioplasm to assume the spherical form; and, indeed, this invariably happens during the transition from active life into the stillness of death, and, no doubt, because in this form less of their substance is exposed to adverse influences, and hence more of their substance is protected by the outer condensed portion. It is by virtue of this principle that germinal matter is often enabled to maintain a vital, though quiescent existence for months, and even years, when separated from its source of nutrient supply.

In every instance in which these agents have been tested, they have proved equally efficacious in exciting muscular contractions.

Finally, Shafer, in his work on Practical Histology, says: "But if any object which possesses the property of refracting light doubly is placed upon the stage of the microscope and examined, and if then the field is made dark by turning the analyzer, it will be found that the doubly refracting substance remains bright, unless it happens so to lie that its optic axis is parallel with the plane of polarization of either nicol. And if the object be a muscular fiber at rest, the whole fiber will appear bright and doubly refracting; whereas, if it be in a state of contraction, the bright stripes only will allow the light to pass, the dark stripes in this condition of the fiber being singly refracting. • Transversely striated muscle is not by any means the only tissue which is doubly refract-

ing, for the property is possessed by the white fibrils of connective tissue, and by bone, as well as by the plain muscular fiber cells. But it is the only one which under certain conditions exhibit alternate bands of singly and doubly refracting substance. It has, however, been pointed out by Ranvier, that it is rather the condition of growth and formation of a tissue than difference of structure which tend to determine differences in the optical properties of the substance of which it may be composed. And he instances the case of cartilage, the matrix of which, although undoubtedly composed of the same substance throughout, is doubly refracting in those parts where the cells, either from pressure or in progress of growth, have come to assume either a flattened or an elongated shape, singly refracting where they remain round."

The cartilage cell, as is well known, is purely and simply a mass of living matter imbedded in a space hollowed out, so to speak, in the matrix; and hence it follows that the difference in refractive property is entirely dependent upon the difference in form which this matter has come to assume.

If, then, we compare the appearances observed in cartilage with the phenomena of polarized light, in which we find that the striated muscle cells are doubly refracting when the fiber is at rest, and consequently the bioplasts elongated, singly refracting when the muscle is contracted, and hence the bioplasts spherical in form, and that the bright stripes in the latter state coincide with the points of union of the cells, end to end, the dark stripes with the centrally located spherical bioplasts; and when we consider that this is in no wise dependent upon a difference in "anatomical structure or constitution," but wholly upon the peculiar formation, *i. e.*, the operation of "shaping and giving form," I think we are clearly justified in stating that we have optical proof of both propositions advanced by us.

By assigning to the cell wall flexible properties, and allowing the bioplasts to passively resume their elongated form on the withdrawal of the exciting influence, we are able to explain how muscular tissue becomes relaxed after having been contracted, and, also, why the former is properly the state of rest.

This theory furnishes us a rational explanation for the

difference which obtains between the two kinds of muscular tissue in the length of time which they respectively require to perform their contractile function; for the rod-shaped bioplast of the smooth muscle cell must necessarily travel over a much greater space in order to approximate the spherical form than is the case with the striated muscle cells. And, again, if the question were asked, Why, both being doubly refracting when at rest, the former remains doubly refracting throughout, while the latter becomes singly refracting at certain points, when they become contracted? we would answer, that the first is so constituted that its rod-shaped bioplast can not do more than approximate the spherical form.

If the question should be asked, Why does muscle retain the property of contractility for an indefinite time after co-ordinate vitality has ceased? we should say, in consequence of there yet remaining in the immediate neighborhood of the contained bioplasm sufficient pabulum to nourish it yet a little while longer.

Taylor, in his work on Medical Jurisprudence, states that "in a case of death from Asiatic cholera Mr. Bumsey observed that half an hour after the complete cessation of respiration and circulation the muscles of the arms underwent, spontaneously, various motions of contraction and relaxation, continuing for upwards of an hour, and that, although previously cold, they then became evidently warmer." He says: "The restoration of warmth after the body has become cold, in such cases, can only be explained by supposing that there still remains about it some lingering trace of vital action, although this may not be indicated by the presence of the ordinary signs of active life."

It is evident that the non-living formed material of an organism can not manifest any evidence of vitality, except as it is acted upon by living matter; it follows, therefore, that whatever trace of vital action may still linger in the muscle is due to change taking place in bioplasm. It is because the bioplasm is living and eating and forming, that the temperature becomes elevated in such cases; or, to be more explicit, during nutritive and formative changes, during the conversion of pabulum into bioplasm, and also the latter into formed material, condensation takes place, and condensation here, as else-

where, always takes place at the expense of an atmosphere of heat, which thus becomes manifest.

The question presents itself, What produces cadaveric rigidity? In every instance in which I have examined bioplasm in the last stage of its vital existence (and these observations have been numerous), they have invariably assumed the spherical form, and thus remained until regressive changes had supervened. The bioplasm of muscle, in accordance with the laws of analogy and with the facts above presented, proves no exception to this rule.

Finally, the question may be asked, "Why, the greater the degree of muscular irritability at the time of death, the latter cadaveric rigidity sets in, and the longer it lasts, and the later putrefaction appears, and the more slowly it progresses?"

Certainly not in consequence of any difference in anatomical structure or constitution, but because muscular "*irritability*," so-called, is directly dependent upon the presence of living, healthy (not shriveled), well-nourished bioplasm, as is clearly evinced by the fact that "the bodies of soldiers killed in the early part of a battle become rigid slowly, while those bodies killed at the close, or after many hours of muscular exertion, become rigid almost immediately." And, secondly, this latter fact shows that, in consequence of the pabulum having been exhausted, the bioplasm soon passes into and through the transition change; while in the former case, there yet remaining an abundant supply of nutrient material, the bioplasts are larger, more vigorous, able to maintain their vital existence longer, and are, therefore, better able to resist adverse influences, die harder, and consequently resist putrefaction longer. So soon as the bioplasts have become completely devitalized, they passively obey the resilient influences of the cell walls, which yet retain their flexible properties, and hence the muscular system always becomes completely relaxed in death.

And now, in conclusion, the old adage, "eating the pudding is proof thereof," is as true here as elsewhere; and hence if we fail to satisfactorily explain every known fact in connection with the diverse phenomena of muscular movements, either during the continuance of co-ordinate vitality, or after respiration and circulation have ceased, we will willingly consign our theory to the fate which has swept multitudes of theories into utter oblivion.

SELECTIONS.

Iron and Phosphorus.

BY CHARLES G. POLK, M. D.

THE subjects which head this paper have long been important and interesting ones to me. From my student days until the frosty years of more than meridian life I have given them much study and research. I think I am in possession of some facts which may not be unacceptable to the medical and pharmaceutical professions. But I have written so much concerning them that it will be difficult to indite a paper without reproducing something I have already said. This more especially is unavoidable when I wish to revise some of my published formulas.

Iron and phosphorus are both recognized as important constituents of the human body, and it is a singular coincidence that both of these are excitants of their own assimilation from food. It is scarcely believed at the present day that the officinal forms of iron are directly assimilated, and applied to the purposes of hæmotosis. In fact, if all the iron not excreted when thus administered be estimated it will be found to be an insignificant portion of the requirements of the organism, not sufficient to be of any value; while all, or nearly all, must necessarily be appropriated from food. The fact being now generally recognized that no animal can assimilate an inorganic compound which has not passed through the elaboration and vitalization of a vegetable organism, the conclusion is inescapable that the officinal preparations of iron do not directly supply iron to the system, but indirectly accomplish it by exciting the assimilation of iron from food. The same truths are equally true of phosphorus, minute doses, not exceeding one hundredth of a grain, exciting the assimilation of more phosphate of lime than can be accomplished from immense doses of the precipitated or officinal phosphate of lime. It would be easy to adduce numerous high authorities in support of this point, but it has been so fully considered in other papers

by the writer, and by others, that it seems unnecessary to add more proof. The value of both iron and phosphorus must here be considered from a therapeutical rather than an organismal point. The parts sustained by both iron and phosphorus in the various duties of animal life do not here concern us further than the part sustained by the non-nutrient compounds in elevating the nutritive processes, and enabling the nutritive system to formulate and appropriate the necessary pabulum from food, and supply the blood with elements required by the various tissues.

Iron has long been recognized as one of the very best of the tonic class; its value is beyond dispute. If at first prescribed on the theory that it directly supplies the ferruginous element to the haemoglobin, the result has been so generally satisfactory that the result at first sight seems to sustain the accuracy of the theory. More careful examination of the subject, however, renders this less conclusive; muriatic acid, quinia, and the hypophosphites of soda and manganese excite ferruginous assimilation nearly as much as the preparations of iron. No one will say that they directly contribute iron to the blood, nor that one hundred grain doses of the metalloid phosphorus will directly furnish phosphate of lime in excess of requirements of the organism. The fact then must be taken that both phosphorus and its nonorganismal compounds, as well as the various pharmaceutical compounds of iron, act entirely by stimulating and invigorating the nutritive processes. The union of phosphorus and iron in medicine is no novelty; nonphosphate and pyrophosphate of iron now employed for almost half a century. The compounds of phosphorized quinia and strychnia have been very extensively used in this country during the last twenty-five years. The formula furnished by Professor Easton, and often erroneously called Aitken's syrup, has long been popular in Great Britain. Each drachm of it contains seventh-eighths of one grain of ferrous phosphate, three-fourths of one grain of quinia phosphate, and one thirty-second of a grain of alkaloid strychnia in combination with phosphoric acid. The formula I published about ten years ago in the "Druggist Circular" is now followed by the greater number of manufacturing chemists. The following is the working formula:

R.	Chemically pure sulphate of iron	. 800 grains
	Phosphate of sodium	. 1280 "
	Sulphate of quinia	. 384 "
	Strychnia	. 8 "
	Acid. sulph. dilute	. sufficient.
	Aqua ammonia	. sufficient.
	Syrupy phosphoric acid,	1 559,22 drachms.
	White sugar (perfectly clean)	19 ounces.
	Distilled water	. 16 ounces.

Dissolve the sulphate of iron in six ounces of water of the temperature of 150° and the phosphate of soda in six ounces of boiling water; mix the two solutions in an air-tight salt mouth-bottle, and let stand until the precipitation is complete. Then carefully wash the magma until the washings cease to be affected by the chloride of barium. Mix the phosphoric acid and distilled water; dissolve in them the phosphate of iron. Dissolve the sulphate of quinia in six ounces of water with sufficient dilute sulphuric acid; precipitate with aquæ ammonia and carefully wash. Dissolve the quinia and strychnia with the iron, add the sugar, and dissolve without heat. Each drachm represents slightly less than two grains of the protophosphate of iron, a slight excess of one grain of the phosphate of quinia, and about one-thirtieth of a grain of the phosphate of strychnia.

Soon after publishing this formula I furnished another one, differing from the above only in containing six hundred grains of the sulphate of iron and two hundred grains of the sulphate of manganese instead of eight hundred grains of the sulphate of iron. This is known as the syrup of the phosphate of iron, manganese, quinia, and strychnia; it has always given me more satisfactory results than the previous combination, and is very slightly more expensive. By adding two hundred and fifty-six grains of phosphate of ammonium to the water and phosphoric acid, a more active, efficient and permanent combination is secured. This very complex syrup is used by me daily with increasing favor. The ammoniac phosphate seems to increase very much the action and enhance the benefit which accrues from this combination. No one who has never employed it in the anaemic forms of rheumatism can form any idea of its good offices in such conditions. Dr. Buckner, of Baltimore, many years ago derived much

good from the phosphate of ammonium in rheumatism, but he never secured the benefit from the single salt which follows this assemblage of remedies. I have also found it to do good in both diabetes and Bright's disease. In convalescence from acute diseases it is a splendid tonic.

SYRUP OF THE LACTOPHOSPHATE OF IRON AND LIME.

Take of freshly precipitated lactophosphate of lime 384 grains; freshly precipitated phosphate of iron 96 grains; concentrated lactic acid, sufficient; syrup of orange flowers, sufficient to make 12 fluid ounces.

Dissolve the lime and iron in the lactic acid and filter into the orange-flower syrup.

The dose is one teaspoonful, containing four grains of the calcic and one grain of the ferrous salt.

In the paper in which I first gave this formula I expressed my high confidence in the following language: "I believe this syrup or a similar one is destined at no remote day to attain the very zenith of professional confidence. In convalescence from acute diseases it promises much. Phosphate of lime is well known to be an important element in the human organism, a real essential in the phenomenon of life. Majendie fed a dog on bread from which all the phosphates had been removed, or ordinary white bread, and starved him to his death in about a month, while another one fed on brown bread containing the normal phosphates encountered no inconvenience. Experiments made by myself two years ago (1870) establish the same conclusion. I isolated all the phosphates from the food of dogs and produced in them rapid emaciation and exhaustion; the ordinary phosphate of lime added to the food did not in the least improve its nutrient property; phosphates isolated from wheat and the lactophosphate of lime entirely remedied the deficiency, perfectly compensated for the normal phosphates of the food; the restoration of the phosphates to the food soon restored them to their former condition. The waste of the phosphates is very great during fevers and inflammations, and the depleted organism demands their restoration. True, every article of food contains them in a greater or less degree, yet the stomach is weak, the digestive and assimilative powers impaired. The emaciated frame demands the phosphorus in a more readily as-

similable form, and this very condition is very excellently filled in the syrup of the lactophosphate of iron and lime."

The Tonsils and Pharyngeal Irritation.

BY HARRISON ALLEN, M. D.,

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THE tonsils have been for the most part studied only when they have obstructed the pharynx; for the relations between such obstructions and the acts of breathing, swallowing and speech are so manifest, that those who run may read. These curious bodies, however, when not of sufficient size to create obstruction, have been ignored as possible causes of other phases of pharyngeal distress.

The following cases are presented as instances of pronounced trouble, arising from slight but persistent irritation from the tonsils and the allied bodies situated at the side of the pharynx:

CASE I. Z., aged twenty-eight, contracted a cold eight years before, which had persisted up to the date of coming under treatment.

The symptoms at this time were: dropping of mucus, fullness in the back part of the throat, and pains in the chest. No symptoms were referred to the nose. Excessive quantities of mucus were constantly raised by gentle regurgitant acts from the laryngo-pharynx. It appeared to well up as from an inexhaustible receiver. Examination was made difficult, for when the mouth was kept open for a short time the fluid trickled into the larynx, producing a spasmodic cough which was very distressing.

The patient, a student of pharmacy, had the appearance of being overworked and underfed. The mucous membranes were pale, the edges of the folds and of the uvula were grayish and translucent. No infiltration anywhere existed. The lips were covered with whitish patches resembling the mucous patches of syphilis, but the existence of this taint was in no way confirmed by other signs, or by the history of the case. The patient did not use tobacco in any form.

This case was treated after approved methods, by spraying, local applications of astringents, by constitu-

tional remedies, etc., for a month without benefit. At the end of this time a renewed careful examination revealed a small nodule lying on the left side of the pharynx below the tonsil. It was suspected as the source of irritation, and after three applications of the electro-cautery was destroyed. The symptoms were at once improved, and have now almost ceased.

CASE II.—Y., aged thirty-five, a book-keeper, of spare habit, came under observation complaining of constant hacking and irritation of the throat, although no mucus was expelled by his efforts. The symptoms were of an aggravated, almost choreic, character. The throat was relaxed and flabby.

The uvula had been amputated by a practitioner in an abortive attempt to relieve the distressing condition. The case was under observation for a fortnight without relief, when the condition of the tonsils was suspected as a possible factor in the causation of the symptoms. These had not been noted in the previous casual examination of the oro-pharynx, for the reason that they were concealed within exceptionally deep tonsillar spaces. The relaxed palato-glossal and palato-pharyngeal folds had reduced these to inconspicuous chinks. Careful examination revealed on each side of the throat pea-like masses of indurated tonsil, pressing backward against the palato-pharyngeal folds. These bodies were destroyed by successive applications of the electro-cautery, and, after the subsidence of the inflammation caused by its use, the symptoms disappeared. Six months have elapsed since the treatment, and the patient remains comfortable.

CASE III.—Miss O., aged twenty-four, suffered from irritation of the throat, referred to the right side. She complained of a sense of fullness, and her breath was exceedingly fetid. She reported for the last named condition, which rendered her morbidly sensitive and almost excluded her from society. The disease had lasted three years, having been treated without permanent benefit by her family attendant, and by a prominent specialist in a neighboring city.

Careful examination revealed the palato-glossal fold stretched out as an operculum over the left tonsillar space and almost touching the palato-pharyngeal fold. When this opercular fold was drawn forward a number of tonsillar pellets were seen lying against the face of a flat-

tened nodular tonsil, and the true nature of the case was at once evident. A diseased tonsil threw off the solid fetid pellets which are characteristic of this body, but owing to the peculiar disposition of the palato-glossal fold, they were retained in contact with the face of the gland instead of being ejected.

The opercular fold was removed with a pair of blunt curved scissors, the parts washed with a weak carbolic acid lotion, and the surface of the tonsil cauterized with the electro-cautery. The trouble at once disappeared, and has not since returned.

CASE IV.—Miss X., aged thirty, referred to me by my friend Dr. Charles H. McCall, had been subject for years to neurasthenia, which had resisted the rest treatment and all other improved methods, until relief was at last obtained through the removal of the ovaries by Battey's operation. Among other symptoms accompanying the neurasthenia was a disposition to laryngeal catarrh, which would follow slight and apparently insufficient causes, such as a little fatigue, a slight change of temperature, or an attack of indigestion. There was also a sense of fullness referred to the region of the pomum Adami and the hyoid bone. She was excessively self-watchful and neurotic. Battey's operation had relieved the neurasthenia, but the pharyngeal symptoms persisted.

The throat was capacious, the palatal folds without infiltration, the tonsils were small, and did not press upon the palato-pharyngeal folds. The palato-glossal folds were not tense or stretched over the tonsils. The parts were excessively irritable, and required careful training before the lower part of the pharynx could be exposed. The examination of this region revealed on the right side a red cock's-comb-like body, lying in the pharyngo-epiglottidean fold, and projecting against the edge of a large epiglottis. The larynx was normal. The symptoms were entirely removed by applications to the swelling just named. The electro-cautery was used upon small surfaces at a time, twice weekly for a month, great pains being taken to avoid inflammatory œdema of the glosso-epiglottidean space.

CASE V.—Mr. W., aged twenty-four, of fair complexion and with reddish hair, had contracted scarlet fever in childhood, and since that time had suffered from repeated attacks of tonsillitis. He contracted nasal catarrh in

1877, which was characterized by a semi-purulent discharge. This was shortly followed by symptoms of pharyngeal irritation, such as constant hacking, etc. There was a copious flow of perfectly normal mucus from the nasal passages, causing distressing efforts to dislodge it. Examination of the nose showed a slight deflection of the septum to the left, reddened membranes, and a thin, amber-colored crust overlying the under surface of the right middle turbinated bone. On the right side of the septum, at the premaxillary portion, was a small superficial ulcer, which was occasionally the seat of moderate bleeding. Examination of the oro-pharynx showed intense hyperæmia, but no inflammatory thickening. The palato-pharyngeal folds were œdematous, and the velum elevated. The palato-glossal folds were relaxed and dusky, while the tonsillar spaces were concealed by two broad opercular bands. No view of the naso-pharynx was obtainable. The patient had been under medical care, without benefit, ever since the beginning of the pharyngeal distress, nearly four years before.

Under a treatment which consisted of spraying the pharynx, the use of gargles, and the administration of tonics, the nasal symptoms almost entirely ceased, and gave no annoyance. At subsequent visits, the naso-pharynx was successfully explored, but it exhibited no abnormal conditions whatever. Under the impression that a local cause of irritation was, however, somewhere present, the throat was again thoroughly explored. The tonsils were found to be mammillated, and concealed by the palato-glossal and palato-pharyngeal folds. They were retroverted, so that their rugose, reddened surfaces were in contact with the swollen palato-pharyngeal folds, and it was accordingly suspected that here was the cause of the distress. Four free applications of the electro-cautery, at intervals of three days, completely removed the symptoms, and the hyperæmic appearance of the pharynx totally disappeared. The treatment was interrupted by an attack of acute rheumatism, but the patient reported again, after an absence of six weeks, so completely relieved that no further attention was necessary. It is of interest to note in this case that not only did the hacking and the flow of mucus cease, but the velum no longer remained elevated, nor did the middle turbinated bone throw out a plastic discharge. The tonsil, in a word, had

not only kept the pharyngeal surfaces in a state of irritation, but had given rise to other symptoms which are usually traced to a different source.

The conclusion to be drawn from the above cases is simple enough. Pharyngeal irritation is often associated with a concealed tonsil, or an infra tonsillar gland, fretting the parts in their immediate neighborhood.

NOTE.—It is mentioned in the paper above that the pharyngeal irritation was associated with nasal disease due to obstructions. I have, in another place (*Amer. Journ. of Med. Sci.*, Jan., 1879), pointed out the causes frequently found in such cases, and the necessity of removing the projections from the nasal septum before recoveries can be established. It is now my custom, when the obstruction is in the premaxillary portion of the nose, in addition to filing or drilling away the osseous spurs or malformed sutures, to reset the triangular cartilage by detaching the inferior border from the triangular notch, to push the cartilage over to the larger side, and then drill or file away the projecting maxillary spur. This procedure I have now practiced in eight cases, with very gratifying results.—*Phila. Med. News.*

Acute Syphilis.

A CLINICAL LECTURE BY FESSENDEN N. OTIS, M. D.,

Professor of Genito-Urinary Diseases, College of Physicians and Surgeons,
New York.

GENTLEMEN: This man presents the characteristic developments of acute syphilis, and affords us an excellent opportunity to study its leading features. The initial lesion is said to have occurred four months ago, and one month after the suspicious connection. It healed in a couple of weeks. During its presence he says it looked like a simple sore, but there is still here a little knot of induration, indicating the character as well as the locality of the lesion. We find, also, well-marked enlargement of the lymphatic glands of the groins, and particularly below Poupart's ligament, on both sides, which latter is quite unusual. You also observe very plainly an eruption on the forehead. It is papular in character, and is characteristic of the secondary eruption of syphilis, the

first eruption being a roseola, which usually comes on at a period varying from six weeks to two months after the appearance of the initial lesion. Then, after another interval of about the same length of time, we get the second eruption, which is papular in character, the first—the roseola—being macular, and occasionally slightly elevated. The second eruption has been described by authors as of a raw-ham color, or a coppery hue. It is rosy in color when it first makes its appearance, but grows darker and darker, until finally the papule passes away, leaving a distinct reddish or copper-colored stain. You will observe in this patient that the eruption is very prominent and wide-spread over the back. Some of the papules are surrounded by a little exfoliated epidermis, which is known as the “collarette of Bielt,” and is considered characteristic by some writers. It is simply an exfoliation of the epidermis of the surface of this papule, seen most distinctly at its base, and is dependent upon modified nutrition, caused by infiltration of the papules with cells. These interfere with the vascular supply of the part, and we get the exfoliation here exactly in the same way that we get it at the point of initial lesion—from accumulation and concentration of cells in that locality. When this exfoliation is present on a papule, it affords an additional proof of the syphilitic character of the trouble. You will, however, see cases of psoriasis where the scales have been brushed off, which so nearly simulate the syphilitic papular eruption that it is impossible to distinguish between them; and without any other aid we are often obliged to wait further developments in order to make the diagnosis. Fortunately, however, for the diagnosis, but unfortunately for the patient, we nearly always have, at the time of the occurrence of this papular eruption, other lesions which aid us in making the diagnosis. The glandular enlargements in the groins, of the neck and also in the epitrochlean spaces—sometimes one, sometimes all—ought to be well marked by this time. You will observe here on the neck a gland, which can be seen at quite a distance—it is so much enlarged. There is a group of large and indurated glands just behind the sterno-cleido-mastoid muscle, and another further back on either side. Here in the right epitrochlean space there is an enlarged gland about the size of a large pea, and what I do not remember to have ever found before,

viz.: another gland about two inches higher up, only a trifle smaller than the first. Quite often the epitrochlean gland, instead of being in the little space above the internal condyle of the humerus, is found an inch or two or three inches higher up, between the borders of the biceps and the triceps; but a supernumerary gland, as in the present instance, is very rare. By this time also papules occur in the mucous membrane, and these are especially characteristic, there being nothing else which resembles them, unless possibly in psoriasis. When syphilitic papules occur in mucous membrane, they usually soon become eroded and covered with a diphtheritic pellicle, to greater or less extent.

Mucous patches--really papules--in the mouth are characteristic of syphilis in its acute stage, and are present in a marked degree in this case. The mouth and the tongue are literally covered with them to an extent which you rarely see. These papules, which appear on the tongue, throat and mouth, are superficial, and so flat that they are scarcely if at all raised above the surrounding surface, or spread over an area varying from the size of a pea to that of half a dollar or larger, having often a gray or pearl-colored diphtheritic edge which occasionally festoons the edge of the soft palate, forming a very characteristic and unmistakable mark of syphilis. Some time ago I was called to see a man who was supposed to be suffering from diphtheria. I found him surrounded by his family, who were in great solicitude about him. On looking into his throat I saw this characteristic festooning of the palate, and did not hesitate a moment in making up my mind that the trouble was syphilitic. Soon having an opportunity to speak to the young man alone, I discovered that he had syphilis, although he had not before been aware of it. The mucous patch is also liable to occur between the toes, or any place where there is habitual moisture. Just at the verge of the anus is a favorite seat for it; and knowing this fact, examination of this locality will often help you out in the diagnosis of an obscure case. The mucous papule, from its prominence when on the skin or semi-mucous membrane about the anus, is usually called a mucous tubercle, and is quite characteristic in this patient, as you see.

You should bear in mind that the secretions of all lesions during this stage of the disease are inoculable, and

one suffering from it may communicate the disease from the secretion of any open lesion upon his body or on the mucous membranes. You will understand, therefore, the importance of warning the patient having such lesion of the danger of communicating the disease to others by contact. A pencil, a pipe, a spoon, a knife, or other article introduced into the mouth where mucous patches are present, some of this secretion contained in the saliva drying upon it, and afterward coming in contact with an abrasion of the lips of another person, will communicate syphilis to that person as positively and certainly as would a syphilitic venereal connection. From this you may see that syphilis is not necessarily a venereal disease, but any one exposed to the ways above referred to is liable to receive it, in which event it will follow the same course as if acquired by venereal connection. The great security which we all have against the accidental acquirement of syphilis is, that it requires an artificial port of entrance—a fracture of the skin or of the mucous membrane for its inoculation. Otherwise, sooner or later, we should all be likely to have it, for we could not come in contact with people who have syphilis without danger of getting it at every turn. But, fortunately, it requires an abrasion for its entry; it is rarely through the ordinary affectionate relations between children and parents, brother and sister that communication of the disease takes place. If, however, an abrasion exists upon the lips of both parties, the disease may be communicated from the one to the other by a kiss. I have often known this to occur in the venereal kiss, but never by the ordinary kiss of courtesy and family affection. But the liability to communicate the poison to an innocent person should be borne in mind by every one passing through the acute stage of syphilis. We must also bear in mind the fact that the disease may be transferred from a syphilitic to an innocent person by the physician, by the use of the spatula, carelessly laying it down after examining a syphilitic mouth, allowing the secretions to dry upon it, then introducing it into the mouth of another patient before properly cleansing it. This is especially liable to occur if the second patient be a child, as by its restlessness during the examination a lesion of the mucous membrane of the mouth may be made by the instrument. All instruments in use about the mouth, throat or teeth should

be carefully cleansed and passed through the flame of an alcohol lamp immediately after use, and certainly before use upon another person, because syphilitic lesions may be present, although unrecognized. Several well-authenticated cases have come under my observation where syphilis has been contracted in the mouth from lack of proper care in this regard. Mucous papules are very often present in the vagina or on the os uteri of females suffering with acute syphilis. In the *Independent Practitioner*, for March of this year, may be found a report of no less than eight cases of syphilis of the finger, in medical men, acquired through vaginal examinations or attendance on syphilitic women during childbirth; and since sending in that report I have seen two similar cases, occurring in the resident medical staff of one of the hospitals of this city. All of these cases were followed by constitutional evidences of syphilis. It is scarcely necessary to say that the early recognition and local treatment of mucous papules, patches or tubercles is one of the important duties attaching to the management of acute syphilis. Another characteristic lesion of the disease consists in the presence of scabs in the hair, as seen in this patient. The discovery of scabs in this locality sometimes enables us to make a positive diagnosis, when otherwise we would be in doubt. Falling of the hair, or alopecia, is one of the common, though not constant, concomitants of this stage of the disease, and it is readily accounted for on the same principle that explains the exfoliation of the epidermis in the syphilitic papules. The crowding of newly formed cells in the vicinity of the hair-bulbs interferes with their nutrition. It is not at all unusual for a patient to lose his hair completely, including his eyebrows and whiskers, but this baldness is not permanent, since on proper treatment, directed to the removal of this superfluous cell material, the hair is renewed. We find that any or all of the foregoing lesions of syphilis may be absent and the patient yet go through a disease which shall be recognized as syphilis. In other words, this disease varies in its intensity as much as any other, and except the enlargement of the lymphatic glands none of the conditions which you see in this patient are necessarily essential to the progress of syphilis. This is a very marked case, one in which we find present more

than the usual number of characteristic lesions or manifestations.

The treatment of this, as well as all cases of syphilis during the acute stage, will be addressed to the removal of the material which is causing the trouble, that is, to the superfluous cell-growth or accumulation, the same material that we find in the initial lesion, and the same as that which we find embarrassing and enlarging the gland structure, the same as in the papule, the same as in the mucous patch, and the same as in the papules which form the scabs which occur in the hair. These lesions are all brought about and kept up by one and a single condition, namely, that resulting from an abnormal local proliferation and accumulation of germinal cells. This fact has been substantiated by repeated microscopical examinations of all lesions of acute syphilis. Consequently, the cause of all the several conditions or lesions of active syphilis being the same—that is to say, an accumulation of this embarrassing cell material—the treatment is simple, and the same for all, having simply for its object the removal of such material.

Therapeutic Action of Chlorate of Potassium.

BY JOHN V. SHOEMAKER, A. M., M.D.*

THIS powerful, energetic and active drug was discovered about the end of the last century (1786), by Berthollet, and was used for the first time by Fourcroy in 1796, with the idea that it might transmit some of its oxygen to the body. At its introduction this salt was principally recommended as an antidote to scurvy. Chaussier proposed it as a remedy in croup. It had completely fallen into oblivion, when Dr. Blache, repeating the experiments made in 1847 by Hunt and West with this medicine in the treatment of gangrene of the mouth and pseudo-membranous stomatitis, was led to try it in the treatment of pseudo-membranous sore throat and croup. The doctor added that he met with marked and decided success from its internal use in scrofulous skin diseases. Likewise Dr. M. Landesberg, of Philadelphia, had reported very grati-

*Abstract of a paper read before the Session on Practice of Medicine, American Medical Association, St. Paul.

fyng results from its topical application in epithelioma of the eyelids.

Dr. Shoemaker then passed to a consideration of its properties and tests, after which he spoke of its physiological action, and remarked that the use of this salt is said by some to be largely due to the great amount of oxygen which it contains, and, therefore, is looked upon as the most potent agent in the treatment and cure of all maladies dependent upon suboxidation or defective nutrition, secretion, excretion, aeration and molecular metamorphosis.

Dr. Shoemaker then considered the therapeutics of the chlorate, showing its decided effect upon the system, and that it acts in some hitherto unexplained manner in abnormal conditions of the blood, changing its character and overcoming morbid states. In speaking of its external application, he said, "The utility of this salt as a gargle in the treatment and cure of mercurial salivation and ulcers of the mouth and throat is universally attested. In the proportion of a dram to a glassful of water it is of service as a gargle in the various varieties of stomatitis, often quickly relieving the dry, red and follicular congestion of the mucous membrane, and healing the ulceration when it exists. As a local application and gargle in inflammation and ulceration of the tongue patiently and long continued, more particularly in the latter, it seems to do more good alone, and at times in combination with astringents, than any other remedy. Used either as a gargle or applied locally with a brush or by atomization in simple catarrh of the anterior and posterior nares, and in simple and chronic catarrh of the larynx it has had in many cases positive and curative action.

He has used a solution of chlorate of potassium, one or two drams to half a pint of water, as a gargle in diphtheria and phthisis. In subacute and chronic stages of otorrhea an injection of chlorate of potassium in the strength of five to ten grains to the ounce of water is often effective. In ozena a douche of a solution of the chlorate of potassium in the proportion of one dram of the salt to a pint of water will cleanse and thoroughly disinfect the parts.

As an injection also in leucorrhœa, in the strength of one or two drams to a quart of water, it will often prove very useful by lessening the discharge and relieving all

congestion of the parts should any exist. In gonorrhea, used as an injection two or three times a day in the proportion of five or ten grains to an ounce of water, it will very often produce an alterative impression upon the parts and completely arrest the discharge. As an injection in chronic dysentery, in moderately strong solutions (dr. to oz.), its use has been recommended.

The chlorate of potassium will bring about a beneficial effect in chancre applied either as a solution, or dusted over the parts. Also in obstinate and chronic ulcerations, gangrenous sores and ulcers, discharging fetid secretion, either alone or dissolved in water. In pustular eczema the use of a solution containing one or two drams to the pint of water, applied with old muslin, will very frequently lessen the discharge and heal the surface.

He then referred to its internal use, and said that the chlorate of potassium as a remedy in croup and diphtheria has been used with great advantage by many eminent and experienced practitioners, from the time that it was first successfully applied by Chaussier in 1819, followed by Hunt, Isambert, Blache, and Drysdale, and others up to the present day. It should in both these maladies be given in decided doses, in from five to thirty grains three or four times a day.

He has secured marked benefits in phthisis. In marasmus, particularly in children, the use of small doses of this salt has a very satisfactory and beneficial influence. He has administered from one to three grains three or four times a day to weak and puny infants, who would regain their nutrition, and fatten on its use in conjunction with good food. In anæmia it acts upon the relaxed mucous membrane of the digestive tract, and so restores its functions.

In the eruptive fevers, such as scarlatina, rubeola, rotheln and erysipelas, full and oft-repeated doses will very often fill the surface with arterial blood, and bring out an abundant crop of the eruption. In erysipelas it may arrest the poisoned state of the blood, and diminish the tendency to suppuration in the parts affected. It has also been said by some observers to be of service in typhus and typhoid fevers.

For diseases of the skin, the chlorate of potassium, given in various doses according to the ability with which the patient bears the drug, is of the greatest value either

in modifying or curing very many cutaneous affections. It is especially efficacious in ecthyma and in boils, carbuncles, styes, pustular acne, pustular eczema and sycosis. It lessens the tendency to suppuration in many of these diseases; and should this latter condition be established before giving the salt, it will be largely instrumental in overcoming the abnormal state of the system.

Its effective action in carbuncles was reported by Dr. Boardman Reed, of Atlantic City, at a meeting of the Philadelphia County Medical Society, September 22, 1880. Dr. Reed stated that the salt had been used upon Dr. Shoemaker's recommendation, who was in consultation with him. "The patient, a young girl, had two carbuncles, one on the back of her neck and the other in front of the ear. They afterward extended until the affected area was about five inches in extent. The patient was very weak. She became feverish, the pulse was rapid and feeble, and very little hope of her recovery was entertained until the chlorate of potassium was used in decided doses. Under good food, with iron, she rallied and became quite well."

Dr. Shoemaker read his first observation upon the action of this drug in 1880, before the section of Practice of Medicine in New York City, and since that time he has not only had continued good effects from this salt, but has also had from many physicians letters and short accounts of cases commending the action of the drug, and corroborating the results he had reached. The doctor further showed the good effect produced from its use in scurvy, influenza, yellow fever, rheumatism, dropsy, hemorrhagic diathesis, cyanosis, syphilis, etc., and then gave the manner of its administration. He said: "If the salt is given in small doses, it will pass quickly and more readily into the circulation taken before meals, diluted with water. if, upon the other hand, very large doses are administered, It will probably be better borne by the stomach after meals. The dose will vary according to the affection and the condition of the patient. He usually gives it in from one-half to thirty-grain doses every one, two or three hours, freely diluted with water. In such doses it is well borne by the stomach even in those who are very weak and enfeebled. He generally begins with a small dose, and gradually increases it until the patient shows sign of its effect, or he sees some improvement in the disease. Those who are large, flabby and apparently vigorous will

improve under smaller doses, as large amounts will sometimes serve to still more increase the fat of the body. Upon the other hand, the pale, weak and enfeebled will bear much larger doses, and will often increase very rapidly in weight.

Action of Aconite.

IN the *British Medical Journal* Dr. Edward J. Tilt says that aconitine has attracted so much attention of late that he will mention the following: A highly nervous lady at the change of life suffered from neuralgia. One or two attacks occurred about every week, when the pain was very severe. Six leeches applied to the temple shortened the attacks; going out of town kept them in abeyance, once, for six weeks, and the only medicine that did the same was aconite. She used the tincture of aconite, in an aromatic infusion, for sixteen weeks, beginning with five drops and gradually increasing until she took twenty-five drops, three times daily. That one caused so great a sense of fullness in the throat that it was reduced to twenty, which caused only slight physiological effects. It kept off the attacks for two, three, and once for four weeks; but it did not in the least diminish their intensity, therefore it was discontinued. The doctor had every reason to believe that the tincture was a reliable one, and could only account for the tolerance of such enormous doses by some idiosyncrasy of the patient. It would be dangerous in the extreme to make a common practice of exhibiting such large doses.

Extraction of Teeth in Pregnant Women.

AT a recent meeting of the St. Louis Medical Society (*St. Louis Medical and Surgical Journal*) this subject was under discussion. Dr. Borck asked, "Is it advisable to allow the extraction of a tooth or of teeth in a woman who is pregnant? I have been several times asked this question by dentists. Some eminent dentists are afraid to extract an aching tooth in a pregnant woman, lest it may cause abortion."

Dr. Green said that it does not necessarily produce abortion. Of course there may be cases where such an

effect would follow, but if the woman is suffering, and can not be relieved by any other means, he would recommend the extraction of the tooth.

Dr. McPheeters said that there is a form of toothache which is sometimes a symptom of pregnancy. The teeth are sound, and, of course, it would do no good to extract them. He would not hesitate to advise the extraction of a carious tooth.

Dr. Hughes said: "Some patients, when pregnant, are extremely hyperæsthetic; the hyperæsthesia extends to the branches of the fifth pair. Other women who are more or less nervous when not carrying a child, seem to possess more nerve then than at any other time. I do not know, in view of the varying and variable physiological condition in which we find women in the pregnant state, that we could arrive at any definite rule applicable to all cases. It is simply a question of individual temperaments, of conditions of the patient, and of the existence of centric or eccentric irritation; the existence or non-existence of central or peripheral irritation. And, if a pregnant woman is extremely hyperæsthetic, and you can find a focus of origin for it in the peripheral irritation of a decayed tooth, there would be no impropriety, in the majority of cases, I apprehend, in the removal of that decayed tooth. If in a condition of general nervous excitation, especially if centered in the brain or cord, you have any form of spasmodic display, and you find a possible peripheral source of the irritation, I think the general sentiment of the profession would concur in the propriety of removing that possible source of peripheral irritation."

Dr. Jonaston said: "Some years ago I was called to a lady who had been married six or eight weeks. The second left molar was decayed and an abscess was forming, and protruded from the root of the tooth. The abscess was painful, and I advised opening it. She consented, and I took my lancet and opened the abscess. This produced a tremendous shock, and in twenty-four hours she aborted. This case occurring in my early practice has made me very careful about extracting a tooth from a patient during the early part of pregnancy if she were of a nervous temperament; it is a hazardous practice. But if the toothache continues, the reflex irritation of the pneumogastric nerve, connecting with the great sympathetic, may induce uterine contraction, and cause the

woman to abort. In such a case we should recommend that the tooth be pulled. There is no rule in the practice of medicine; and no rule as regards drugs, except castor oil. I have given colomel for twenty years, under the supposition that it acted on the liver, and now we are told that it doesn't act upon the liver at all."

Dr. Hurt closed the discussion by saying: "I think we are all obliged to concede the possibility of the extraction of a tooth during pregnancy producing abortion under certain conditions. There is no doubt, also, that there are circumstances under which the extraction of a tooth during pregnancy ought to be advised. The loss of a sound tooth ought not to be allowed unless something is going to be accomplished by it that can not be accomplished otherwise. But I would have no hesitation about advising the extraction of a tooth from a pregnant woman, if it was absolutely necessary to relieve her from a distressing, harassing pain that was wearing her out; and in doing this we may administer an anæsthetic without interfering in the least with the pregnancy. When she is under chloroform or ether we obviate the shock which is usually attendant upon the extraction of teeth. And experience has taught that pregnant women are very tolerant of these agents."

Treatment of the Diarrhœa of Phthisis.

IN the *Lancet* Dr. C. Theodore Williams says, speaking of the peculiar diarrhœa of phthisis, that, arising from ulceration, it requires very careful attention. The great point to be kept in view is the healing of the ulcers, and this can only be attained by shielding them from all irritable substances, and by promoting a healthy granulating action. The treatment, in fact, resolves itself into three sets of measures.

1st. Rest in bed and the administration of only such food as can be quickly and easily assimilated without causing much distention of the intestines, or accumulation of flatus. Such are chicken broth, beef and veal tea, milk gruel, blanc mange, always combined with liquor pancreaticus, and prepared after the admirable methods of Dr. William Roberts, of Manchester. Dr. Jagielski recommended koumiss specially in these cases.

2d. Warm applications to the abdomen, in the form of linseed poultices, turpentine stupes, or hot-water fomentations, to reduce the pain and promote a certain degree of derivation to the skin. If the pain be severe, I have found the application of a small blister over the area of tenderness on pressure, as recommended by Dr. J. E. Pollock, very advantageous. I have noticed, in some obstinate cases, that when the blister has risen, the diarrhœa has been considerably reduced, and pain existing in the abdomen at the same time has subsided.

3d. Internal medicines. When we have reason to believe that the ulceration is slight and confined to the small intestines, the diarrhœa may be treated by bismuth and opium, or by some astringents. The liquor bismuthi et ammoniæ citratis (B. P.) is a convenient form, but not always so effective as the powdered carbonate or the nitrate of bismuth in ten to twenty-grain doses. Dover's powder combined with it in ten-grain doses is often effective. The most powerful astringent is the sulphate of copper in a quarter to half-grain doses, combined with half a grain to a grain of solid opium. Of the various vegetable astringents I have found tannic acid in four-grain doses to answer best, far better than rhatany and catechu, but in all cases I combine it with a certain amount of opium, to reduce the irritability of the ulcers. Indian bael, especially a preparation of the fresh fruit, is often efficacious in checking the diarrhœa if the ulceration be limited. If, however, the ulceration attack the large intestine as well as the small, it is obvious that more local treatment is advisable, and recourse should be had to injections or suppositories. The enema opii (B. P.) administered twice a day is sometimes sufficient, and may be strengthened by the addition of acetate of lead, four grains to an injection, or of tannic acid, five grains. This is a small injection, and it is doubtful how far its local effect reaches. Where the ulceration is very extensive, and involves the greater part of the large intestine, an attempt ought to be made to apply the remedies more thoroughly to the mucous membrane; and for this purpose injections of larger amount—from a pint to a pint and a half—may be used, consisting of gruel or of starch, or, best of all, linseed tea, and all containing a certain quantity of opium (thirty to forty minims of the tincture). I would specially recommend the linseed tea, as it appears

to exercise the same beneficial effect on the ulcers of the large intestine as it does in follicular ulceration of the throat. One of the most obstinate cases of intestinal tubercular ulceration I ever witnessed yielded to linseed tea injections, after almost every other treatment had been vainly tried, the ulcers apparently healing, the diarrhœa ceasing, and the patient living for two years afterward, and dying of pulmonary lesions. In cases where the stools are very fetid, I have added glycerine or carbolic acid to the injection with advantage. In many cases, however, it is desirable to give the large intestine as much rest as possible, and not to stretch the ulcerated mucous membrane through any distention by fluids; in these cases suppositories of morphia (from half a grain to a grain), or of the compound lead one, or of those of tannic acid, are indicated, and the treatment of the diarrhœa arising from lardaceous degeneration of the intestine is not very hopeful. Where the very channels of assimilation—viz.: the villi—have undergone degeneration, as well as the various structures from which the succus entericus is poured out, it is difficult to see how treatment can restore the lost tissue. Dr. Dickinson's researches show that the loss of alkali is the chief characteristic of the disease. Dr. Marcet's analysis show that the chief chemical feature is deficiency of phosphoric acid and potash, and excess of soda and chlorine, and on this principle we should give phosphate of potash. When, however, the disease has so far advanced as to reach the intestine, it may be considered beyond any effective general treatment. We must be content to restrain the diarrhœa, if we can, by astringents, the more powerful the better. Tannic acid in from two to four-grain doses, with dilute sulphuric acid, sulphate of copper, or sulphate of zinc, are the most useful, and injections of these substances do some good.

The Healing of Lung Cavities.

BY WM. EWERT, M. D., F. R. C. P.

ALL situations do not afford like facilities for processes of healing. The opportunities offered by the *inner sub-clavicular* region are exceptionally good. The sternal

lobe, when free from adhesions, as is usually the case in early phthisis, is capable of exercising by its hypertrophy effectual pressure upon the smaller cavities; and the shortness of the bronchi supplied to the affected region is another favorable circumstance.

Healing is more uncommon in cavities situated at the outer aspect of the apex; there exists in this region a greater tendency to extension to the supra-scapular region, and to secondary disease in the upper axilla; and moreover the disposition of a mass of secondary tubercle, so commonly observed in this situation, generally leads to inveterate disease.

Cavities situated in the *sternal* region do not usually occur from other causes than hemorrhage, or as a late result of advanced phthisis. In the latter case they are unlikely to heal; in the former the possibility of a favorable termination is not excluded, although too often the cases in which blood is inhaled into this district present extensive disease elsewhere. The upper sternal region is probably more favorable for healing than the lower, which receives its bronchial and vascular supply from a greater distance.

In the *axillary* region secondary excavation is for obvious reasons ill-suited for recovery.

Primary cavities in the axilla are placed under very different circumstances. They are surrounded by spongy material capable of vigorous reparative action. I have frequently noticed in the mid-dorsal or axillary region small spherical scars, obviously the remains of small cavities at the mid-dorsal region of the lung, and I have in my possession a specimen in which cicatrization of a larger cavity, although uncompleted, had proceeded to a considerable extent.

Basic cavities are so uncommon that the healing of vomicæ in this situation must be of very rare occurrence. The basic excavations which belong to the last stages of the disease are clearly unfitted for recovery, and to them I will not further allude. Probably many of the instances of healing basic vomicæ hitherto alleged were really cases of mid-dorsal disease, in which the cavernous sounds were conveyed to the base by some transient consolidation. Echo may have a share in the production of cavernous sounds at the base.

Again, in the large class of bronchiectasis to which so

many basic cavities belong, the cavernous sounds are apt to disappear periodically, owing to the filling of the bronchial sacs, and an impression may be produced that a phthisical cavity has become obliterated.

But when due allowance has been made for these possible fallacies, it must be admitted that primary cavities may originate at the base from various causes, and that they are not incapable of recovery. One great disadvantage they all possess in common: I refer to the difficulty of drainage. Adhesions to the diaphragm also constitute, where they exist, a most serious complication; but when we consider the quantity of spongy tissue by which they are surrounded, and the powerful cough-pressure that can be utilized for their voidance and for their contraction, we must conclude that they are, in these important particulars, singularly favored, and we are led to surmise that cavities at the base may occasionally run through their stages unobserved, and ultimately heal, more frequently than we suspect.—*Medical Times and Gazette*.

Chloroform and Nitrite of Amyl.

In a recent communication to the *Medical Record* attention is directed to the use of nitrite of amyl in chloroform narcosis. It is stated in *Holmes' System of Surgery* that "nitrite of amyl has received the highest commendation as a means of combating chloroform narcosis. Its administration being by inhalation of the vapor, it can only be resorted to in some cases. Recoveries have unquestionably followed its use, but whether as a sequence or consequence is not so clear, and further observations are needed. It must be remembered that, although nitrite of amyl is a most effective remedy in one form of cardiac disease, its brilliant service is not due to its action on the heart, but upon the peripheral arterioles, spasm of which it relaxes, and that its action in lowering the blood-pressure is not favorable to its use in chloroform accidents." Experiments show, however, that hypodermic injections of five drops of nitrite of amyl, after complete anæsthesia and abolition of reflex action, with suspended respiration and a fluttering heart, are promptly followed by reaction of the pupils of light, resumption of respiration, and improved cardiac action, with ultimate recovery; so that

the administration of this agent need not be limited to the inhalation of this vapor, but it may be given hypodermically. Again, although "its brilliant service is not due to its action on the heart," the result is similar, since, by the *vis a fronte* effect produced when the arterioles are relaxed, the cardiac current is drawn into the enlarged vessels, and stasis is prevented. Further, the statement that "its action in lowering the blood-pressure is not favorable to its use in chloroform accidents" does not seem to be borne out by the clinical experience. Dr. James L. Minor, of Rapidan, Va., reports a case in which a patient who had locomotor ataxia passed suddenly from a condition of usual health into collapse. There was general pallor, with complete unconsciousness, and the arterial beat was imperceptible at the radial pulse, but faintly recognized at the femoral pulse. Here was evidently a lowering of the blood-pressure similar to that which occurs in chloroform syncope. The ordinary method of inhaling a few drops of nitrite of amyl was tried in vain, and then three minims were injected hypodermically. In a few moments the heart responded, and the pulse was recognized in the radial artery. In about half an hour the effects of the medicine seemed to disappear, when five minims were injected, with the result of producing action more vigorous than before. The patient lasted for nearly twenty-four hours, during which time amyl nitrite was frequently administered. As much as fifteen minims were given at one of the doses when the "pulse became incompressible." So long as the vital powers were able to respond, the administration of the medicine was followed by a reaction which seemed marvelous.

Cases are also recorded in which impending death is said to have been conclusively averted by nitrite of amyl.

Sciatica (Two Years); Nerve-Stretching; Cure.

(Under the care of Dr. Truman.)

MRS. M—, aged fifty-four, a multipara; menopause occurred several years ago. Had a blind husband, and to keep the family had to work for many hours a day, sitting upon a hard wooden chair. No history of gout or rheumatism. She first felt pain down the right leg in the summer of 1879; at the end of July, 1879, she had a fall, which

increased the pain. The pain continued, not very severe, until July, 1880, when it became intense, and since that time she has suffered daily. She has been under treatment at different hospitals for the last two years, and everything in the shape of drugs internally, and local applications, has been tried, including belladonna, morphia, aconite, bromides and carbonates of the alkalis, faradisation, etc. There was slight relief experienced from blistering the surface overlying the course of the sciatic nerve, and applying morphia to the sore, and also from acupuncture, which sometimes would relieve her pain for twenty-four hours. For the past fifteen months, however, she has not been free from the pain for twenty-four hours at a time.

On admission on October 19, 1881, she was a fat woman, with weak, flabby muscles, and looking underfed. She had attacks of pain in the course of the right great sciatic nerve, at intervals no greater than an hour, day and night. These attacks were so severe as to cause her to shriek out and shed tears, and the pain was described as of a cutting, burning, shooting character. There was no swelling or tenderness over the part affected. There was a fissure extending through the right side of the cervix uteri for half its length, but there was no fixation of it, or of the uterus. The pain was limited to a line about two inches in length, commencing at the lower border of the gluteus maximus. It was thought that from continued pressure probably on this spot from the hard edge of the chair in which she sat at work, that there might be some thickening or adhesion of the nerve sheath which an operation would remove. The operation was performed on October 21, 1881, under carbolic acid spray. The patient was rendered unconscious by the administration of an anæsthetic mixture composed of ether, chloroform and absolute alcohol. An incision was made at right angles to the course of the great sciatic nerve, through the skin and superficial fascia, the lower edge of the gluteus maximus found and followed to the tuber ischii. The finger was passed deeply down by the outer side of the long head of the biceps, and the nerve identified and drawn to the surface. Two or three steady and vigorous pulls were given in both an upward and downward direction (toward the pelvis and foot respectively). The nerve was then allowed to sink. There was no hemorrhage, no ligature being re-

quired. A drainage of horsehair was placed in the wound, the sides of the wound were brought together by silver wire sutures, and antiseptic dressings applied. For some days the patient was in considerable danger owing to her high temperature, the very great amount of discharge from the wound, and the unwillingness of its edges to unite. The temperature was on the 21st, 100°; 22d, 100.9°; 23d, 100°; 24th, 99.6°; 25th, 100.3°; 26th, 100.5°; 27th, 101.0°; 29th, 101.0°. (Evening or maximum temperature are here given.) On the 28th she was ordered two grains of quinine disulphate three times a day, and the temperature sank to normal on the 28th, rose to 99° on the 30th, and sank to and continued normal after this. She was well fed with animal food, milk, eggs, etc., but had no alcohol in any shape. The wound gradually healed, and she was discharged on November 16, exactly a month after admission. She has had no pain whatever since the operation, and this statement is correct at the present time, more than six months since the operation.

The Autopsy Upon the Body of Guiteau.

WE have the pleasure of presenting to our readers the fullest and most authentic report as yet obtainable of the autopsy held upon the body of Guiteau.

It is already known that the arrangements for the examination were deficient in many respects, owing either to the lack of opportunity or of knowledge on the part of those directly responsible. With every wish, no doubt, for the contrary, there was an utter failure to arrange for a thorough and scientific study of the brain. We would not deprecate the value of our correspondents' work, however. All the facts of scientific value, and they are many, that could be gleaned between the tumbling of the brain into a grocer's scales and the final distribution of fragments are presented here by them.

We learn that the membranes were slightly diseased. This disease was of a character which indicated nothing regarding Guiteau's insanity.

As to the brain itself, and its convolutions, there was a high degree of fissural ornamentation, a well-marked asymmetry of fissural arrangement on the two hemispheres, and an absence of the confluent fissural type. There was

a well-marked fissural and general development of the frontal lobes. These also, we are told, had a peculiar shape. There was no gross evidence of disease anywhere in the brain-tissue. It is not at all likely that the microscope could have revealed anything. Under the unfortunate plan of unsystematically cutting the brain in pieces, hardly anything can be expected from the microscope now.

On the whole, therefore, the evidence gathered by Drs. Morton and Dana shows that the brain had probably no detectable disease, that it had a somewhat peculiar fissural arrangement, and that it was of rather a high type. The cause of Guiteau's morbid mental state lay in structural or chemical deviations too delicate for detection with our present knowledge.—*Medical Record*.

MICROSCOPY.

Is Malignant Disease Parasitic?

BY RUSHTON PARKER, B. S., F. R. C. S.,
Professor of Surgery in Liverpool.

I HAVE to show you micrococci from acute abscess, gonorrhœa, and pyæmia, and bacilli from a wound in a case of septicæmia. They are prepared by Koch's method of aniline-staining, and rendered distinct under microscopes bearing high powers, illuminated, in two instances, by Abbe's condenser; and are additionally represented in the diagrams which hang before you.

The germ-theory of disease is so far a reality, that spirillum is the demonstrated organic cause of relapsing fever, bacillus anthracis, that of splenic fever; while the local and constitutional changes in septicæmia, pyæmia, and acute suppuration, are equally proved to be due to the presence, propagation, and influence of bacilli and micrococci of various sizes, and differing degrees of irritative or toxic virulence.

In reviewing the germ-theory of infective disease in general, and of traumatic infection in particular, it may be convenient to allude to two distinctive types, severally represented by septicæmia and pyæmia. Many of the

infective diseases having been proved, most of them are provisionally supposed to be due to organisms imported in some way from without. The organisms present in decomposing animal fluids, are both numerous and various, yet they are fortunately, "pathogenic" only in an extremely small minority. Some of them are always present in decomposing, and under certain conditions in suppurating wounds; while, even in health, the cutaneous and mucous surfaces may be peopled with organisms of several distinct kinds. Under the type represented by septicæmia, may be classed anthrax (and possibly, also, measles, typhus, and their associates), where the blood is simply polluted with an organism, or with its products. Septicæmia proper, seems to be of two kinds: (1) septic intoxication, or toxæmia, due to sepsin evolved by the septic bacteria (themselves confined to a putrid part of the patient or victim); and (2) septic infection or toxæmia, in which the septic bacteria themselves enter the blood. In the septicæmia of mice, bacilli are the form of organisms concerned, and found in the blood, or in the infected wound, or in both. But they are often not to be found in casual specimens of the blood, owing to their more numerous accumulation in the capillary vessels rather than in the main blood-stream.

In pyæmia, as investigated in rabbits, the organisms concerned are micrococci. There have been changes of opinions as to the appropriateness of the word pyæmia, as a descriptive term, especially in the old sense, implying a suppuration of the blood, seeing that the introduction of pus into the blood had chiefly a negative value in the attempted experimental production of pyæmia. But, since Mr. Lister showed, in his observation of the breaking down of the infected blood-clot in a donkey's vein, that a genuine suppuration of the blood can indeed take place, the rational value of this necessary traditional expression is once more established. Pyæmia is characterized by a clotting of the blood, and the distributed infection of an organic ferment. The micrococci crowd together, increase the adhesiveness of the corpuscles, and promote the clotting of the blood, even in capillary vessels. The thrombi, whether large or small, are foci for the further development of the micrococci; and hence, all the secondary phenomena, which, like the primary, may be suppurative or not.

In septicæmia, the bacilli kill by poisoning the blood, without giving rise to secondary inflammations, or primary local manifestations; whereas, in pyæmia, the micrococci cause clotting of the blood, and set up embolic pneumonia, nephritic infarcts, and perhaps also suppuration of the joints. The micrococci do not seem to be, in themselves, always so extremely poisonous; but, by giving rise to suppurative or other organic changes, indirectly lead to death by perversion of visceral functions.

What is the immediate cause of death in perforation of the bowel? The general answer is, "Collapse," which is, indeed, true enough when collapse actually takes place. But how are we to explain the cases where neither collapse nor death occurs? Perforation, or rupture of intestine, with diffusion of contents throughout the peritoneum is followed by peritoneal absorption, and the collapse is septicæmic; but a similar occurrence into the tissues, and not into the peritoneum (or only gradually and slowly into that serous sac), is a sure cause of acute (because putrid) abscess, but is often followed by recovery. A similar explanation attends the fatality of intestinal gangrene—as a complication, for instance, of strangulated hernia. It is a modern canon of surgical pathology, that, in gangrene of any superficial part, putrefaction will occur unless circumstances specially prevent it. Dry gangrene may spontaneously fail to putrefy, except at the moist line of demarcation; but moist gangrene will infallibly putrefy, unless the timely disinfection of the superficial surface be artificially undertaken. But, if this be successfully done, the disease may be arrested, its spread prevented, and its disappearance accomplished, without loss of substance.

In the case of the intestine, no such prevention can be practiced, so putrefaction inevitably attends the establishment of gangrene, demanding the prompt and free excision of this (as of any equally advanced) gangrenous organ.

A case of hernia, three days strangulated, recently came under my care at the Liverpool Royal Infirmary. At the necessary herniotomy, I removed twelve inches of bowel, with some omentum, and the patient for a time did perfectly well; in fact, nearly recovered, but eventually died collapsed. After the *post-mortem* examination, it was found that fresh patches of gangrene had appeared in other parts of the intestine, and thus the temporary relief

and the ultimate death were both explained. Cases have been already reported, in which this operation has been perfectly successful.

Although bacilli are the characteristic organic poison in the septicæmia of mice, and micrococci in the pyæmia of rabbits, it is to be noted that Koch found rabbits liable to a true septicæmia produced by micrococci, differing in shape, size, and distribution from those producing pyæmia in the same animal.

Tubercle is an infective disease, now known to be due to an organism which gives rise to the characteristic manifestations. These are both anatomically and physiologically allied to pyæmia. Opinions have, in the past, been apparently divergent as to the supposed real nature of tubercle; for instance, one school of able observers held that it was a purely inflammatory process, while another, equally able, and its allies, have always regarded it as a specific disease, due to an infective virus. No doubt the histological phenomena of tubercle are consistently explained as inflammatory, and so are those of pyæmia. But what causes the inflammatory changes? The very specific virus once thought to be an explanation antagonistic to the former, but now woven inseparably into it, in the form of the tubercular bacillus, so admirably discovered by Dr. Robert Koch.

Syphilis again presents many features analogous to those of pyæmia, and some have even alleged that they have seen a special syphilitic germ. But though this is not yet sufficiently proved, it is probable that such a germ exists. As for gonorrheal rheumatism, its clinical features have long been interpreted as those of an aseptic pyæmia, which, fortunately for the patients, lacks the anatomical proofs that might be afforded if it terminated fatally; while ulcerative embolic endocarditis is a true aseptic pyæmia, on the best anatomical evidence.

There is another infective disease which I venture to compare with pyæmia, and that is malignant disease, more especially its so-called carcinomatous varieties. Like tubercle, the inflammatory character of which is admitted on all hands, so far as the histological changes are concerned, the cutaneous, mucous, and glandular cancers have very close affinities to inflammation. The primary growths are essentially a plastic catarrh; and the round-celled infiltration, by which they are additionally

indurated, shares, with the similar indurations of undisputed inflammation, a histological identity. Simple inflammations, however, are resolvable, their infiltrated products disappearing on the subsidence of the irritant cause, be it chemical or mechanical; whereas, the cancerous induration is unresolvable, be it a malignant stomatitis, glossitis, enteritis, or dermatitis, as in epitheliomas, or be it a malignant adenitis, as in mammary or other glandular cancers. Round-celled sarcoma, again, is a true infiltration of the plainest possible kind, whether it constitute a malignant cellulitis, periostitis, or ostitis, or even an interstitial orchitis, or any other adenitis; and differs only from undisputed inflammation of regions and organs in its "unresolvability." But the very unresolvability of carcinomatous tumors, whether primary indurations, lymphatic infections, or disseminated visceral growths, has a distinct parallel in the similar unresolvability of pyæmic, tubercular, and neglected syphilitic phenomena.

The cachexia of acute cancer, and of acute sarcoma, when now and then it kills as a poison, without prominent local symptoms, is not unlike that of pyæmia, of tuberculosis, and even of syphilis; the lymphatic glandular infection, and all its attendant and consequent phenomena, is conspicuously similar to various forms of infective inflammation; while the malignant thrombi that form in veins, in cases of carcinoma and sarcoma alike, with the still more frequent embolic disseminations of these truly infective appearances, have a resemblance to the thrombosis and embolism of pyæmia, too obvious to need defense.

More than six years ago, I was led to the assumption that malignant disease had inflammation for its anatomical type, by the histological examination and comparison of inflammation, tubercle, and cancer; and I have taught it, during the greater part of that period, as an idea justified on anatomical grounds, though not entitled to acceptance as a truth. As a mere hypothesis, I venture to suggest it here, with the intimation, that many things will surprise me more than the discovery of a parasitic germ originating malignant growths.

The bacillus of tubercle, though discovered, separately cultivated, and successfully inoculated by Koch, is still most difficult to find, and then chiefly in the freshest

growths. The microphytes of disease, how terrible soever be their vigor, or the initial reality of their presence, are sometimes exhausted, and even effaced, in the transformations of tissue which they themselves educe—exhausted, as noticed in tubercle, by Koch; effaced, as observed by Lister, in the ass' jugular. The parallel, once established, recurs even in prevention, in treatment, and in cure. Against pyæmia, the only certain safeguard lies in preventing the primary infection; in tubercle, we already extirpate the earliest manifestations when we can get at them; while in cancer, timely excision does sometimes amount to effectual eradication. The purpose is, in all, to avoid the dreaded physiological "infection."

THE contributions of microscopy to clinical medicine have been so great within the past ten years that the whole system of general medicine is now rapidly ascending to the lofty plane of science. When the causes and nature of disease reach the minds of men who accept nothing less than demonstration, we may soon expect our therapeutics to shine out before the lights of science.

GLEANINGS.

DR. J. MILNER FOTHERGILL ON USE OF MALTINE.—In order to aid the defective action upon starch by the natural diastase being deficient in quantity or impaired in power, we add the artificial diastase "maltine." But, as Dr. Roberts points out, in order to make this ferment operative, it must not be taken after a meal is over. Rather, it should be added to the various forms of milk porridge or puddings before they are taken into the mouth. About this there exists no difficulty. Maltine is a molasses-like matter and mixes readily with the milk, gruel, etc., without interfering either with its attractiveness in appearance, or its toothsome-ness; indeed, its sweet taste renders the gruel, etc., more palatable. A minute or two before the milky mess is placed before the child or invalid, the maltine should be added. If a certain portion of baked flour, no matter in what concrete form, were added to plain milk, and some maltine mixed with it, before it is

placed on the nursery table, we should hear much less of infantile indigestion and mal-nutrition.—*Practitioner*.

TREATMENT OF STRUMOUS GLANDS.—The treatment of chronic caseating strumous glands has undoubtedly been improved in quite recent times. In the earlier stages the external application of iodoform in the form of its colloid is frequently of marked service, and when suppuration has taken place, the thorough local application of powdered iodoform and the enucleation of the glands are of great value in cutting short the affection and producing a quick recovery. In a paper in the *Central. f. Chirurg.*, Dr. von Lesser points out that the disease in the glands often assumes the form of small caseous foci, which may become encapsuled and possibly calcareous, but are more likely to lead to suppuration, during which they are extruded, or to general tubercular infection. In view of these events he has, while the glands are still only indurated, attempted to enucleate these caseating portions of the glands. His operation is thus performed: Fixing the gland and pushing it forward under the skin with the finger and thumb of the left hand, he makes a small puncture through the skin and into the gland with a narrow knife. Through this wound he passes a small sharp spoon and scrapes the interior of the gland. The soft cheesy portions readily yield and come away, while the more healthy parts of the gland prove more resistant. If several glands lying close together are enlarged, he operates on them all, or on several through one skin wound, the spoon being pushed into one after another. By this means the disease is cut short, ulterior dangers are avoided, and unsightly scars prevented. Lesser recommends that the operation should be done with strict antiseptic precautions, and that care should be taken not to wound any large vessel, nor to leave behind in the wound any of the cheesy debris.—*Lancet*.

LAPAROTOMY IN PURULENT PERITONITIS.—The patient, a young man, aged twenty-one, operated on successfully by Dr. Schmidt for purulent peritonitis, was shown last year in the Medical Society of the Moscow Military Hospital (*Wratsch.*, Nos. 51, 52). Eight months before, he had been admitted into the hospital for recurrent fever. In the hospital he had three attacks, the last being followed by inflammatory fever, the cause of which was not clear.

Six months thereafter the patient came into Dr. Schmidt's hands in a very reduced condition, and with a well-marked exudative peritonitis. He decided to open the abdominal cavity, and, under antiseptic precautions, with the patient under chloroform, he made an incision from the umbilicus to the symphysis. On division of the thickened peritoneum, a large quantity of healthy pus gushed out. As there was no sign of decomposition, the cavity was emptied as completely as possible without washing it out with any antiseptic. Two finger-thick drainage tubes were inserted, the wound sewn up, and a strict Listerian dressing applied. The dressing was at first changed daily, afterwards every five to ten days. The wound healed without a bad symptom, and, in two months from the operation, the patient was recovered. Dr. Schmidt believes that the cause of purulent peritonitis is the escape of low organisms from the intestine into the abdominal cavity. Such may be the case, but certainly in this instance the explanation by a thrombosis, brought about by the recurrent fever, seems to lie nearer to hand. But however that may be, the case is an interesting and encouraging one, indicating that surgical treatment is justifiable in purulent peritonitis, as it is in empyema.—*London Medical Record*, June 15, 1882.

ARSENIC A PROPHYLACTIC AGAINST INFECTIOUS DISEASES.—Dr. Walter G. Walford, in a letter to the *London Lancet* of May 20th, proposes the administration of arsenic to persons exposed to scarlet fever and diphtheria, believing that if the drug be given in full doses during the incubative stage of these affections, it will forestall their development or modify them to such an extent that they may be treated as trivial ailments. Believing in the germ-theory of the cause of diphtheria and scarlatina, and having noted a statement to the effect that a person who is under the influence of arsenic can not be successfully vaccinated, he began to administer the drug to children not previously afflicted with the disease, in whose families there was an outbreak of scarlatina. During a period of several years he had submitted about one hundred children so exposed to this prophylactic treatment, and among this number two only had developed scarlet fever, and in these the disease presented itself in a very mild form.

His experience with the drug as preventive of diphtheria

is limited to his two sons, whom he removed from a school where from local conditions diphtheria had attacked six of the boys, two cases being fatal. Under the administration of arsenic the younger son did not develop any symptom of the disease; but the elder, who was complaining of soreness in the throat at the time he was placed under treatment, showed after six days two small but unmistakable patches of diphtheritic false membrane on his fauces, "although his temperature never rose above 100° F., and his health and spirits scarcely flagged." In a few days he was well.

The preparation employed by Dr. W. is the liquor arsenicalis (P. B.). He gives it at first about three times a day in as large a dose as can be safely used, due regard being had to the age of the child. Each dose of arsenic may be combined with from fifteen minims to a half drachm of sulphurous acid and a small quantity of the syrup of poppy. This makes a pleasant mixture, of which the children are fond.

He thinks that arsenic might be made available as a preventive against many other affections, among which he mentions hydrophobia as an extreme test of its prophylactic qualities.

ASPIRATION OF THE BOWELS IN PERITONITIS.—A successful instance of this measure is reported by Dr. D. M. Williams, in the *Dublin Journal of Medical Science*. The patient was a boy of thirteen. We quote the most interesting part of the history:

His condition was now alarming; the pulse was, for the first time, irregular and compressible—144 to the minute; breathing very shallow; eyes sunken; cheeks hollow; tongue dry; constantly moaning with pain—evidently dying. He placed his hand on the epigastrium, and said the pain was smothering him, no doubt from pressure upward of the diaphragm interfering with the action of the heart and lungs. The abdomen was arched from the xiphoid appendix to pubes, the least attempt at percussion causing great agony. Had not passed water since the 7th. I determined to aspirate him, and passed the finest needle into the transverse colon, and on turning the tap a great quantity of flatus rushed through, followed by three ounces of fluid fæces, which gave him great relief, but did not perceptibly diminish the size of the

abdomen. Fearing the needle was blocked, I withdrew it, and found such was not the case. I had evidently emptied this portion of the colon. Having washed the needle, I pierced the ascending colon; another rush of flatus took place, followed by eight ounces of fæces. I repeated the operation on the descending colon, with the same results. There was now very decided diminution of distention and relief of pain; still he complained bitterly of a spot just below the navel, which was quite tympanitic. Taking care to avoid the bladder, I pierced probably the ileum; more flatus escaped, with about half an ounce of fluid fæces. He was now much relieved; pulse had fallen to 96; breathed deeper. 10 P. M. Much the same as after the tapping; expression of face less haggard; pulse 120, full and soft; temperature 102°; passed water freely, and without pain, an hour after the tapping. To take pulv. Doveri, gr. 10, h. s. From this time his progress toward recovery was steady.

DIPHThERITIC CONJUNCTIVITIS TREATED WITH QUININE.—In the *Lancet*, Dr. John Tweedy records four cases of pseudo-membranous (diphtheritic) conjunctivitis, in which he derived most satisfactory results from the local use of a solution of quinine. Three of the four cases occurred in men and one in a woman. Two began as purulent conjunctivitis, of gonorrhœal origin, and two were pseudo-membranous from the first. As soon as the nature of the disease was definitely recognized, all other treatment was stopped, and quinine lotion, containing four grains of sulphate of quinine, with a small quantity of dilute sulphuric acid (to effect a solution), to an ounce of water, was alone used. As far as possible the diseased surfaces were kept constantly bathed with the solution, the conjunctival sac being converted, as, it were, into a trough, holding the quinine lotion. A bowl of the solution was put within reach of the patient, who was directed to wash the eye frequently, and in the intervals a well-soaked compress was kept constantly applied. The house surgeon visited each case three or four times a day, when he would evert the lids and thoroughly cleanse the conjunctival sac with the quinine lotion.

The superficial, disintegrated portions of the exudation were then gently removed by lint, care being taken not to aggravate the inflammation by rough handling, or by

rude attempts to tear off the false membrane. Usually the quinine lotion was iced. In two cases the local application of powdered sulphate of quinine was tried at first, or sulphate of quinine rubbed up with an equal part of calomel; but in addition to causing great pain, the powder did not seem to be as beneficial as the quinine in solution, and its use was soon abandoned. The virtues of quinine he believes to be specific in the diphtheritic exudation. Three of the cases recorded were at first treated by frequent ablutions, with a five per cent. solution of carbolic acid, and in every instance the pseudo-membranes rapidly spread under these applications, whereas they were immediately controlled by the quinine lotion.

SULPHUROUS ACID IN TYPHOID FEVER.—Dr. Burney Yeo, in the June number of *The Practitioner*, gives an account of certain experiments made with sulphurous acid in typhoid fever. Three cases are cited, but the first was of too mild a type to prove any good effect from the drug, and in the second the remedy was discontinued because of alarming hemorrhage from the bowels before any effect was noted. In the third case the remedy was first used on the fourth day of the fever, the dose being one half dram of the acid every four hours. During the first five days of treatment the temperature ranged between 102° and 104° F. On the ninth day the evening temperature was 103.6°, but on the tenth day there was a notable fall. From this on to the twelfth day it did not rise above 102°. On the thirteenth day the temperature fell to 101.2°, and for the next six days it reached on one occasion only as high a point as 101°. During this time the patient seemed to be doing well, except that he was always nervous and depressed. There had been no abdominal tenderness or distension, and but five actions from the bowels during nine days. On the nineteenth day, however, he complained of abdominal pain. The temperature began to rise, reaching 103.8° on the twenty-second day, and upon the twenty-eighth day it was 104.2°. Diarrhœa and hemorrhage became persistent, and he died with symptoms of perforation on the twenty-ninth day. The post-mortem examination revealed abdominal lesions of great gravity.

Dr. Yeo concludes that while the remedy exerts no influence over the intestinal lesion, it certainly seems to have modified in a remarkable manner the temperature-

curve of the fever, just as quinine in large doses is often found to do. It is worthy of note that in this case, notwithstanding the extent and gravity of the intestinal ulceration, the temperature was never very high, only twice reaching 104° .

FORCED ALIMENTATION IN PHTHISIS.—This question has latterly attracted considerable attention in France, particularly through the clinical experiments of M. Debove, who has been in the habit of giving to such patients milk and eggs exclusively, but in large quantities.

At a recent seance of the Soc. Medicale des Hospitaux, he informed the Society that he had recently substituted pulverized meat for the former exclusive alimentation by eggs and milk.

He was led to this practice through consideration of the fact that carnivorous animals are less frequently affected with phthisis than herbivora.

M. Debove makes use of a powdered meat prepared as follows: The raw meat is placed under a powerful press and all the juice squeezed out, and put one side; the dry meat is then placed in a slow oven and finally reduced to a fine powder, which is carefully sifted. Four pounds of meat give, by this process, somewhat over six ounces of this powder, which may be mixed with or beaten up with eggs, for use in alimentation.

Relatively, considerable proportions of meat thus prepared may be taken on weak stomachs. M. Debove habitually administered, per diem, half a pound of this powder with twelve eggs and a quantity of lentil flour. Phthisical patients thus nourished regain flesh rapidly, and at the autopsy of one of them who died through accident, it was found that there was a commencement of cicatrization in some of the cavities.

M. Dujardin-Beaumetz confirmed the results obtained by M. Debove's method, and stated that he had also found it of inestimable service in two cases of incoercible nervous vomiting.

PYROGALLIC ACID IN THE TREATMENT OF VENEREAL ULCERS.
—Dr. Andrieu (*These de Paris*, 1881) says that pyrogallie acid has been introduced into therapeutic use by Dr. Jarisch, of Vienna. Since then M. Vidal at Saint Louis, and M. Terrillon at the Lourcine Hospital, have applied it successfully to the treatment of soft chancre. The

formula used at the Lourcine is as follows: Starch, 40 grammes; vaseline, 120 grammes; pyrogallic acid, 40 grammes. This ointment should be used fresh, and kept in a stoppered bottle. To remedy the inconveniences of dressing venereal ulcers with fatty bodies, M. Terrillon has substituted for the ointment a powder composed as follows: Pyrogallic acid, 80 grammes; starch, 80 grammes. This powder is blown on the part by means of a small bellows. Nevertheless, a certain number of cases reported by Dr. Andrieu in his thesis tend to show the superiority of the ointment over the powder. If one application be made daily, the duration of the treatment is notably abridged, in comparison with the methods generally employed. It is sometimes necessary, when the ulcer is very extensive, to make two applications; but the latter is the exception. After the second application, the chancres will have lost all their virulence.—*London Medical Record*, June 15, 1882.

ECLECTICS.—The Eclectics are the lineal descendants and heirs of the Thomsonians of a past generation, whose botany, as Prof. Asa Gray informs me, included not only *lobelia*, but also "*highbelia*." The eclectic writers and teachers seem to be a sort of half-armed medical militia, of the class that spells inflammation with one *m* and whiskey without the *e* in the last syllable. I do not suppose their practice differs very much from that of those whom we call regular physicians. One of their "professors," who recently left the eclectic for the regular ranks of the profession, gives as his reasons that the original and cardinal doctrines of the eclectic school—opposition to blood-letting and certain mineral remedies on the one hand, and the use of various new remedies on the other—have been largely adopted by the regular school of medicine. Whatever credit belongs to Samuel Thomson and his successors, the eclectics, let us not deny them. But the real change of medical practice, so far as it can be traced to any individual sources, may with a good show of reason be laid at the door of such teaching as that of Louis on Blood-letting, of Dr. Jacob Bigelow on Self-limited Diseases, and of Sir John Forbes's *Nature and Art in Disease*.—*Holmes; Bost. Med. and Surg. Jour.*

EYE AFFECTIONS FROM MALARIAL POISONING.—The most frequent lesion (*Kipp, Trans. New Jersey Med. Soc.*) is a

superficial ulcer of the cornea, usually of one eye only, always with severe pain in and around the eye, photophobia and lachrymation. The first stage of the ulceration is an opaque linear swelling, with injection of the adjacent cornea; the central portion sloughs off, and though in favorable cases the ulcer spreads no farther, a progressive destruction of the superficial corneal layers may follow. In either case the reparative process is extremely slow. Other affections of the eye which have been noticed to occur in connection with malarial fevers, are diseases of the uveal tract, hemorrhage into the vitreous body, retinal hemorrhage, optic neuritis, partial or total loss of vision of one or both eyes, without visible changes in the ocular structures, and, therefore, presumably dependent on disturbances in the nervous centres. Such conditions are referred to in the writings of Macnamara and others quite well-known to the surgeons of India.—*Lond. Med. Record.*

PROCIDENTIA IN THE FIFTH MONTH OF PREGNANCY; REPLACEMENT AND DELIVERY AT TERM.—Dr. V. G. Webb (*Brit. Med. Journ.*) reports a case in which a woman, after carrying a bucket of water, had bearing down pain on the following day, inversion of the vagina, and extrusion of the uterus five or six inches from the vulva. The parts were oiled, reduction effected and a Greenhalgh's spring pessary introduced. Lead injections were ordered with rest in bed. After five days inflammatory symptoms had subsided and she was allowed to get up. The pessary was worn four months without discomfort. Four and a half months after the accident normal delivery occurred, and after fourteen days the patient resumed her household duties without any subsequent discomfort.

TREATMENT OF FREQUENTLY RECURRING "ERYSIPELAS" OF THE FACE.—Dr. James Braithwaite (*British Med. Journal*, Vol. I., 1881, p. 681) says that for many years his father and himself have used with entire success a strong solution of tannin (four to eight grains to the drachm of alcohol and water). This application, which is not disagreeable to the patient, should be painted over the parts affected with a soft brush every two or three hours, and allowed to dry, the patient being careful to keep the face from the fire. If there is a tendency to frequently recurring "erysipelas," it is well to keep the tannin at hand, as it will always arrest a threatened attack.

BOOK NOTICES.

SYPHILIS. By V. Cornil, Professor in the Faculty of Medicine of Paris and Physician to the Lourcine Hospital. Translated, with notes and additions, by J. Henry C. Simes, M. D., Demonstrator of Pathological Histology in the University of Pennsylvania, etc., and J. William White, M. D., Lecturer on Venereal Diseases and Demonstrator of Surgery to the Philadelphia Hospital. With 84 Illustrations. 8vo. Pp. 461. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: R. Clarke & Co. Price, \$3.75.

This work, though printed in the form of chapters, constitutes the lectures of M. Cornil delivered in the Lourcine Hospital in 1878. As the translators consider that a genuine addition has been made to the knowledge of syphilis by the publication of them, they have undertaken the labor of translating. M. Cornil, more than any author with whom we are acquainted, treats the disease from an anatomical standpoint. He has made the microscope a constant assistant in his study, and the elucidations exhibited by its means are most interesting to every pathologist and histologist also. His observations were made upon tissues removed during life, permitting him at once to examine the separate elements, and to place portions in preserving or hardening fluids before they had undergone the slightest cadaveric change. With the camera-lucida, he drew the principal types of the different lesions; and, although the drawings reproduced in a single color by lithography give only an imperfect idea of what is seen under the microscope, yet their general accuracy is vouched for.

In consequence of the many microscopical illustrations—about seventy-five—which are contained in the work, delineating very beautifully and apparently with great accuracy the abnormal changes of structure produced by syphilis, the microscopist, having cases of the disease to treat, will have his interest in the treatment greatly intensified. Thus aided in bringing the microscope to bear in examinations in each case, as the affection proceeds in its course, either involving the system more and more, or proceeding towards a cure, the practitioner, who uses a microscope, will have the means of making orig-

inal investigations and making new discoveries, for the minute anatomy of the disease has, as yet, been but very little studied.

A TREATISE ON THE PHYSIOLOGICAL AND THERAPEUTIC ACTION OF THE SULPHATE OF QUININE.—By Otis Frederick Manson, M. D., Professor of Physiology and Pathology in the Medical College of Virginia. 12mo. Pp. 164. Philadelphia: J. B. Lippincott & Co. Cincinnati: R. Clarke & Co.

It is astonishing that, so long a time as quinine has been employed by the profession as a therapeutic agent, there should not be as yet, with but an exception or so, any definite and recognized opinions in regard to its properties. There is general assent that it is the remedy, *par excellence*, for interrupting the paroxysms of intermittent, but it seems to be the only one of its numerous properties in regard to which there is harmony in the views of the medical men. While it is agreed as to its action in intermittent, yet it remains an open question whether this action is due to anteperiodic properties, which would tend to interrupt the course of any periodical affection, or whether it is brought about merely by neutralizing a specific poison which produces intermittent and no other disease.

We learn from the work that quinine was first separated from cinchona in 1820 by M. M. Pelletier and Caventoll, Parisian chemists. Surely their close and arduous labor has been one of the greatest boons to the human race—a boon so great that the mind can scarcely comprehend its “length and breadth, height and depth.” Previously, the disgusting and nauseous powdered cinchona bark had to be swallowed in tablespoonful doses. People generally could not have been so sensitive then as now, and, in addition, had a tolerance irrespective of sensitiveness. Our experience convinces us that the patients of the present time could not take the doses of the early part of the century. If the consent of the sufferer was secured, the system would rebel, and the result would be fatal. But, in the discovery of quinine, besides obtaining a remedy that can be easily administered, having all the properties of the cinchona, a great increase was added to the scope in the employment of bark, and properties discovered, although the profession may not be in harmony

in regard to them, that were unknown before which have proven to be of the greatest therapeutic value.

But we did not design to write a paper on quinine, but to notice the book on our table.

We can assure our readers that they can not better invest a dollar (the price of the work) than to purchase this little book. Every page is filled with the most valuable information in regard to one of the most important remedies of the profession. The powers, properties and method of employment of quinine are clearly set forth. Not only the extensive experience of the author is given, but there are also presented at length the views of writers of authority in this country, England, France, Germany, Italy, etc. Not only young, but old, practitioners will find in the work a treasury of information.

TRANSACTIONS OF THE AMERICAN GYNECOLOGICAL SOCIETY.
Volume 6. For the year 1881. 8vo. Pp. 542. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: R. Clarke & Co. 1882.

This volume of Transactions is fully up to the previous ones in the value of the papers published in it. Besides the Annual Address of the President, Prof. Byford, of Chicago, there are found the following papers, with others: Exploratory Puncture of the Abdomen, by H. J. Garrigues, of New York; Pelvic Effusion resulting in Abscess, by G. H. Lyman, of Boston; Genital Renovation by Kolpostenotomy and Kolpoecpetaisis in Urinary and Fecal Fistules, by Nathan Bozeman, of New York; Forcible Elongations of Pelvic Adhesions, by Ely Van De Warker, of Syracuse; Lupus or Esthiomene of the Vulvo-anal Region, by Isaac E. Taylor, of New York.

The papers treat the subjects to which they are devoted in a thorough manner—presenting not only the results of the experience and reflections of the respective writer in each instance, but also affording all the recent knowledge acquired by the investigations of others. We regard the work a very valuable one indeed, one which all interested in gynecology would want.

JAUNDICE IN PREGNANCY, WITH REPORTS OF CASES. By J. W. Underhill, of Cincinnati.

The above is the title of a reprint from the *Gynecological Transactions*, which we have received, bound in paper

covers. The author sets out with the statement that he does not purpose to treat exhaustively the etiology, pathology, symptomatology and management of the different forms of jaundice, which may occur during pregnancy. The paper consists mostly in the report of a number of cases with remarks upon them. We notice that, among other deductions, he concludes that acute atrophy of the liver occurs more frequently than appears from statistics; and that many cases of jaundice in pregnancy, ascribed to other causes, ought, in reality, to be classed as due to this affection. Among the conditions which give rise to jaundice, and which affect pregnancy especially, as is stated by Dr. Underhill, may be named: Disease of the liver and biliary ducts; constriction of the ductus choledicus and hepaticus; stenosis of same ducts; mental emotion; pyemia; typhus; the epidemic form; malarial fevers. The paper is one quite interesting, containing much valuable information, notwithstanding its brevity.

EDITORIAL.

NOTICE.—Although we generally require advance payment for the MEDICAL NEWS, yet there are a number of subscribers whose subscriptions, from a desire to favor them, we have permitted to run on for a number of years. Some of these had written us asking for time. We really can not wait longer. We desire to be accommodating to the utmost, but as we are under the necessity of paying cash for work and material, we can not always be extending time. If those who are thus indebted to us for subscription for a considerable period of time, do not remit on receipt of present number, we will be under the necessity of discontinuing the journal immediately, and placing their bills in bank for collection.

SOME TRADE NAMES FOR BLACKENED SULPHUR.—Our readers, on reading this heading, will wonder what we mean by it—what sort of an article we have written with such a title. We will explain by stating that a very familiar article of the Materia Medica, and a very common one in commerce, which sells, at wholesale, for a small sum per pound, has been changed from its old familiar yellow color by being mixed with some cheap black coloring

substance, and has had an unheard of price placed upon it—being sold from two to five dollars per pound. In other words, the substance to which we refer has been blackened and then has had given to it a "Trade Name," altogether different from its former common name. In addition, in its grim and dark visage, properties have been ascribed to it which it is supposed will cause it to be greatly demanded, although it has been known, for almost ages, we may say, that quite a number of these properties belong to the substance in its natural form.

Notwithstanding we are living in the nineteenth century, with the twentieth not far away, attempts still continue to be made to impose upon the credulity of people by means that many of us would hesitate to employ with uncivilized people for fear they would detect the transparent fraud. What honest man could have believed that any one would dare at this day to blacken common sulphur with lampblack or other means, mixing an aromatic with it, so that when the preparation has been set on fire the odor of the sulphurous acid gas would be somewhat covered, and then advertise the product for sale, assuring people that it is genuine "Ozone," and will prevent the decay of all perishable articles? Stating in circulars and handbills that a leg of mutton treated with it, or several dozen of eggs, or a lot of roasting ears subjected to its influence, will be preserved for weeks and months from decay. But to add still more to our astonishment, we have placed in our hands a box of black powder labeled "Malarine," which on examination with the microscope and other means proves to be sulphur blackened; and it is stated in the accompanying circulars that it is an absolute protection against small-pox and other infectious diseases, besides being destructive to rats, mice, mosquitoes, etc. It is also said that those *who use it need not protect themselves against small-pox by vaccination!* While the manufacturers of this blackened sulphur, who call themselves the "Malarine Co.," charge agents a dollar per package for it, they advise their agents to charge *from three to five dollars* in retailing it out.

We have been informed that the individuals, who are thus selling sulphur under the trade names of "Ozone" and "Malarine"—merely changing its color—have made many thousands of dollars.

The above remarks we have designed merely to be in-

troductory to an article sent us by Prof. R. B. WARDER, which he entitled "Some Trade Names for Blackened Sulphur," which we have placed at the head of this article. We examined "Malarine" microscopically along with Prof. W., and had no difficulty in recognizing the sulphur, notwithstanding it was colored, from the peculiar mode of arrangement of the grains. Prof. Warder's article is as follows:

The antiseptic and disinfecting powers of sulphurous acid, more correctly called sulphurous anhydride, SO_2 , being well known to chemists and others, some ingenious parties have introduced a preparation of sulphur, under different names, both for the preservation of meats, fruits, etc., and to destroy germs of infectious diseases.

This preparation is a dry powder of dark sage green or black color, with more or less of a cinnamon odor, and containing a very small percentage of particles, having a cinnamon brown color. If the substance is ground in a mortar, or even crushed under the finger nail, a yellowish color of sulphur becomes apparent. Under the microscope, with low powers, the botryoidal form of flowers of sulphur is plainly seen, though nearly all seems to have an iron grey color. Under a power of 200 diameters, however, with good light from above, a clear yellow background is seen, almost hidden by a very thin coating of lamp-black or a similar form of carbon.

The "Prentiss Preserving Co." advertise their product as "Ozone," with unbounded promises of what it is to accomplish in the preservation of all perishable articles. These are placed in an air-tight chamber, a spoonful of the "ozone" is ignited, and the sulphurous anhydride in some cases seems to do good work as an antiseptic. The manufacturers claimed (until exposed by the writer), that their preservative "is simply and purely ozone." Having yielded this point, they also admit that it does not always give satisfaction with certain fruits. Their claim that water treated by their process "will cure dyspepsia" may easily be tested by the medical profession. But it seems useless to disprove one claim after another in detail; sulphur is cheap, the practical effects of sulphur fumes upon animal and vegetable substances are pretty well understood, and those who wish to experiment further in this direction will probably buy their sulphur directly,

instead of paying one or two dollars per pound, for the sake of a small addition of lamp-black and cinnamon. It was stated a few months ago that a company of provision merchants in this city had agreed to pay \$20,000 for the exclusive privilege of dealing in "ozone" in Hamilton County, if its claims were substantiated. If they were satisfied with their experiments, and closed this bargain, they had better watch the "Malarine Co.," which is now selling essentially the same preparation, through the druggists and grocers, at only 50 cents per half pound.

This "Malarine" is also to be burned, but its purpose is to fumigate houses. It is said to be absolute protection against small-pox, rats and mosquitoes. It is probable that insects and vermin will find the sulphur fumes disagreeable, if they are shut up in a closed room; and fumigation is well enough in its way; but the vendors of malarine distribute a printed statement that vaccination is unnecessary where this "prevention" is used. Such a statement, if it is believed, becomes positively dangerous to public health.

Chemical analysis gives the following results.

	"Ozone."	"Malarine."
Sulphur,	93.67	94.8
Fixed carbon and ash,	4.72	4.2
Loss, moisture and traces of volatile matter,	1.61	1.0
	<hr/> 100.00	<hr/> 100.0

Further details will be found in the "Scientific Proceedings of the Ohio Mechanics' Institute," p. 40 and 103.

THE ANNUAL REPORT OF THE INEBRIATES' HOME, FORT HAMILTON, N. Y.—We are just in receipt of this most interesting report. It is certainly worthy the attentive study of every intelligent physician.

As we feel sure that those of our readers, who have not received a copy of the report, will be interested in many of the facts contained in it, we here present quite a number of them.

There is a tabular statement of 600 cases of inebriety. One hundred and forty-seven (147) of them, or nearly one fourth, received a liberal education—about one in six having had a collegiate course. Of the males, about one

in eleven followed professions. A large proportion were skilled mechanics; and of those engaged in business, none were below medium in point of general intelligence and capacity—many exceeded this point.

There are at present among the patients, clergymen, lawyers, physicians (thirteen physicians), and representatives from all classes of society, who once held remunerative and responsible positions; but now, in many instances, voluntarily seek the shelter and aid which our asylum affords. The physician who writes the report says that the fact that dipsomaniacs come from the more intelligent and educated classes of society, is fully substantiated.

In the institution at Fort Hamilton, the legal limit of the period of commitment is six months; although the person can be discharged within that limit, if the medical officers see fit. This class of involuntary commitments numbered 194. Another class, however, come of their own accord, and, in reality, commit themselves, by voluntarily signing a contract or obligation to the effect that they will submit themselves to the rules, treatment, and discipline of the institution for a definite period.

Of the voluntary cases, there were 406; and, although in excess of the "Involuntary Class," it does not show that they entered the asylum voluntarily to avoid the unpleasant and public process of committal by the court, but, in the majority of cases, because they were conscious of their need of medical care and restraint.

It seems that the principal hereditary cause of inebriety in the 600 inmates or patients of the institution is an inebriate father or mother, especially as the records show an inebriate father in 209 of the cases. In nine of the cases there was an inebriate mother, and in twelve there was both an inebriate father and mother. In twelve, there had been an inebriate grandfather.

With such a showing, it would be folly to deny the heredity of inebriety. It is also shown in the tabular statement that inebriety begets insane as well as inebriate offspring. This is shown in cases 13, 123, 125, 252 and 413 of the table.

Five cases of the table show an inebriate father and son, and a son insane; four cases show an inebriate father and two inebriate sons; in seven, the father, mother and son were all inebriates; in two, father and son were in-

ebriates and mother insane; and in one instance father, mother and son were inebriates, and sister insane.

Several years ago, in an editorial in the *MEDICAL NEWS*, on the heredity of crime and vice, we endeavored to show that, when the members of a family became addicted to crime or vice by the previous criminality or viciousness of a parent, nature always set about to cut short the existence of the family; and we think that the careful study of the report before us will tend to establish the views we then expressed, although the writer evidently did not have in mind any such final result of the excessive use of alcohol.

Of the 600 inebriates, 358 were habitual and 242 were periodical. Of the habitual, 191 of the cases and 154 of the periodical had been addicted to inebriety for over ten years before entering the asylum. One hundred and eight had received asylum, or some other form of treatment, before entering. Of the males, 491 used tobacco, 16 had never used it; of the females, 70 used tobacco, 23 never did.

It is mentioned in the report in regard to various diseases affecting inebriates, some of which had doubtless acted as an exciting cause. There were 42 of the whole number who had some form of lung affection—33 having phthisis. Syphilis existed in 145 cases—nearly one-fourth having it. It is noted that this disease is not unfrequently an exciting cause, especially when the nervous system has become involved. When existing, it should always be regarded as a complication and receive proper treatment. A large proportion of the cases had suffered from gonorrhea, especially of the males. The relatively large proportion of venereal diseases in this class of persons is due to the fact that, in the earlier stages of inebriety, excessive venery is the rule. In the latter stages of inebriety, however, coitus can only take place under the exciting influence of stimulants; and, finally, when structural lesions occur, the inebriate becomes impotent and alcohol loses its effect in this particular.

Further, we note that 166 persons had 309 attacks of some form of alcoholic mania at various times during their periods of alcoholic addiction; 49 of these had sustained some head injury; 4, fracture; 41, concussion; 4, sun-stroke; a certain proportion were syphilitic, epileptic or phthisical, and, in some instances, two or more of these

complications' existed in the same person. In some cases, there were suicidal and homicidal tendencies.

Of the 600 tabulated cases, 100 still remain in the institution. Of the 500 discharged, 283 have been heard from as follows: Doing well, 148; improved, 10; unimproved, 86; died, 29; transferred to lunatic asylum, hospital or almshouse, 8; idiotic, 2. Of those not heard from, it is reasonable to suppose that a fair percentage are doing well, or they would have been heard from in some way.

The report advises, as recommended by Dr. B. W. Richardson, of London, in referring to the difficulties that surround the use of alcoholic stimulants in general medical practice in preventing patients contracting an appetite for them, and thus continuing their use after convalescence, that they be dispensed in the form of alcohol, and not as beer, wine, whisky, etc. This, it is stated, has been the practice of the Inebriates' Home at Fort Hamilton, for the past two years, with most satisfactory results.

The officers of the Inebriates' Home are: Theodore L. Mason, M. D., President and Consulting Physician; L. D. Mason, M. D., Attending Physician; J. A. Blanchard, M. D., Medical Superintendent.

A LABORATORY STUDY OF LISTERINE.—In a previous number of the NEWS we spoke of the antiseptic properties of Listerine, as prepared by Lambert & Co., of St. Louis. In the *Louisville Medical News*, in an article with the above heading, Dr. F. M. Deems writes as follows in regard to it. We will mention that Dr. D. was formerly Laboratory Instructor in the University of New York, and is a member of the New York Microscopical Society:

"Without entering here into a discussion of the question as to whether or not fermentation of every sort (be it alcoholic, acetic, lactic, mannitic, butyric, ammoniacal, or putrefactive) is due to the action and formed under the influence of living organisms on the material undergoing change, 'it will be admitted on all sides, first, that these living entities are the invariable accompaniments, under ordinary circumstances, of fermentative processes; second, that substances which poison or kill these germs likewise avert these processes.' Anti-zymotics, therefore, are substances used for the purpose of preventing decomposition, but their most important use is to kill dis-

ease-germs—to destroy the activity of the living particles which constitute contagion. In this sense I believe Listerine is, from numerous, varied, and repeated tests—the details of which I append to this report—a powerful and trustworthy antiseptic agent. It prevents the various fermentations.

“Meat keeps indefinitely in Listerine. It is a swift and sure destroyer of infusorial life. It destroys the activity, growth, and motion of low forms of vegetable life. Owing to this property, combined with its non-toxic effect on the human system in quantities medicinal and not excessive, it has the great advantage over carbolic acid in that it may be administered *internally* as well as used with freedom either by injection, lotion, or spray in the natural cavities of the body, such as the ears, nose, mouth, throat, larynx, trachea, bronchial tubes, rectum, vagina, urethra, and bladder. Even in full strength Listerine does not coagulate the albumen of the flesh. I believe that owing to its germ destroying power and non-poisonous action it is peculiarly adapted to the treatment of diseases affecting these parts, especially to those calling for an antiseptic remedy. Inasmuch as there is a great difference between the environment of germs in ordinary fermentations outside of the body (as in the experiments below recorded) and those in the organism, it is evident that doses and *dilutions* of antiseptics generally, and of Listerine in particular, harmless to the former. Pending my investigations of its power over ferments, I have used it in my daily practice, and so far my clinical experience has confirmed my expectations of its efficacy. It is an agreeable and perfect tooth and mouth-wash. I have used it with success in purulent conjunctivitis (diluted one-third), and two cases of leucorrhea yielded promptly to its use. I shall look for excellent results from its administration during the summer in the various diarrheal diseases of that season.

SMALL GRANULAR CELLS OF THE BLOOD.—Dr. James T. R. Davison, in the *Lancet*, of June 24, states that blood contains, in addition to the red and white corpuscles, a number of granular colorless cells, which present varied forms and sizes, and are generally very much smaller than the red corpuscles. They have a great tendency to adhere to the cover-glass or slide; they occur singly or in groups.

Sometimes after the blood has been drawn from the finger these cells become clearer; if present in groups the individuality of the cells becomes lost, and the group appears a single granular mass. Prof. Norris regards them as undeveloped red corpuscles. In healthy blood they are present in extremely small numbers, but are very abundant in certain pathological conditions.

Dr. Davison's observations lead him to believe that the granular cells are present in excess under two conditions: First, as the result of their excessive formation brought about by certain states of the system demanding it; and, second, as the result of diminished power in the process of charging them with hemaglobin, whereby many of them remain in their undeveloped state, and do not become fully formed red cells. In the inflammatory exudation produced by a blister, Dr. Burdau-Sanderson years ago found granular corpuscles which degenerated into fibrin. These cells must be identical with those under consideration, for they are constantly seen to change into fibrin, while leucocytes never do. We have then the important fact that in inflammatory serous exudations, such as we have in pleurisy, rheumatic fever, etc., the small granular corpuscles of the blood migrate from the blood vessels.

Dr. D. proceeds to say that we must come to the conclusion that the coagulable fluid on the surface of the mesentery, in inflammation of it, is full of undeveloped red cells, which has degenerated into fibrin—that is, that in ordinary inflammation, in addition to the migration of leucocytes, there is a migration of the small granular corpuscles. We have good grounds, then, for believing that not only in serous inflammatory exudation, but also in purulent exudation, there is a migration of the undeveloped red corpuscles. If, then, in local inflammation the blood is drained of its small granular corpuscles, nature must in some reflex manner stimulate the formative organs of these cells to increased action in order to meet the demand made upon the blood. Hence in local inflammations we would expect to find any of these cells in the blood.

But Dr. D. has found as a matter of fact an abundance of small granular cells in the blood of chlorotic patients, and in that of those convalescing from rheumatic fever and pneumonia. We have not space, however, to state

his reasons accounting for this, together with his remarks, but must refer to the original article in the *Lancet*, of June 24.

THE BIRTH OF AN ELEPHANT.—Dr. Gustavus E. Sussdorff, of New York, contributes to the July number of the New York Med. Jour. and Obstet. Review an account of the process of parturition as it took place in the case of the elephant "Queen" last February. The period of gestation was five hundred and ninety-seven days. There was no noticeable enlargement of the abdomen until it suddenly became quite prominent the day before labor began. This enlargement did not subside with the expulsion of the fetus and after-birth, but continued four days longer. During the latter months the mammæ became swollen, and soon filled with serous milk. These were the only signs of pregnancy to be seen. The labor began at 3 o'clock P.M. February 2d. At this time the mammæ were greatly distended with milk, which came away continuously in drops. The vagina now began to drop down and swell. In a short time thick mucus began to come from the vagina in long ropy strings, and almost poured out just before delivery. From 3 to 8 o'clock "Queen" was evidently uneasy, as she constantly moved her body from side to side, but did not seem to suffer *pain*, and quietly munched some hay up to the very moment of delivery. At 8:10 P.M. the young elephant was born, the head presenting, completely enveloped by the unbroken membranes. The head and part of the body rested between the hind-legs of the mother, and touched the ground. Without waiting a moment, the mother ruptured the membranes with her two hind-feet, when the young one rolled out on its back. The membranes were no sooner liberated than they quickly returned into the vagina. The umbilical cord had not been seen at all, having probably been torn away during the descent of the fetus. The mother now quickly turned to the young, and on seeing it began to roar and bellow furiously, which she continued for ten minutes. As soon as she saw the baby she also at once placed one fore-foot on it and rolled it several times, as one does a lemon under the palm of the hand, the bellowing and roaring continuing. In a moment or two more she placed her abdomen upon a short post in the ground, to which she was chained, standing almost upon her head, and grasping

the post with her trunk, thus forcing the abdomen with great power against the post. "Queen" remained in that position for about ten minutes; then became quiet, and, while playing with her young, took some food. Nothing indicative of after-pains could be recognized after this, and in one hour and thirty minutes the placenta was expelled. With it there came about two quarts of clotted blood. There was no hemorrhage either from the uterus or from the umbilicus of the calf. The duration of labor was five hours and ten minutes. The calf, a female, weighed two hundred and forty-five pounds, and stood just three feet high. It began nursing one hour and forty minutes after birth. It had two middle upper teeth. The umbilical cord entered the abdomen about three inches anterior to the vagina, and had been detached very close to the abdomen, as none was visible at that point, the canal being open and large enough to admit a good-sized finger for half an inch.

Dr. Sussdorff remarks that there are several very interesting and instructive points in this history. First, the period of gestation is evidently not affected by change of climate and captivity, lasting about nineteen and a half months. The time of labor is short, and evidently there is not much pain. The sagacity of the animal is remarkable, as shown by the manner in which she ruptured the membranes, the means she took to excite respiration by rolling the young, and, finally, her effort to expel the placenta from the uterus. He then describes the placenta and the fetal membranes, comparing them with those described by Owen, and adds a summary of various observations which have been made on the milk of the elephant as compared with that of other animals, giving drawings which show its microscopical characters in comparison with those of cow's milk.

THE GREAT CINCINNATI INDUSTRIAL EXPOSITION.—We expect all of our friends and the friends of our friends to attend the great Cincinnati Industrial Exposition, which opens September 6, and continues open until October 8. This one will undoubtedly excel any previous Exposition, however fine any of them may have been. The Directors have for months been making the greatest exertions to have a magnificent representation of objects of interest in every department that interests. Not only the artist,

but the scientist will find here collected many rare and curious objects that he would not probably be able to find represented in any other place.

The collection in natural history has always been large, but this year it will be much larger. The display of scientific apparatus, we are assured, will be such as has never been excelled.

But want of space will not permit us to catalogue what will be exhibited. There will be such a display as will well remunerate any one to visit Cincinnati, while it is continuing, from the most distant points.

The citizens of Cincinnati are taking so much interest, and have become so enthused, that it is the design to have a Grand Pageant display upon the streets on the day of the opening. Let everybody come and see.

PAPERS READ BEFORE THE AMERICAN MEDICAL ASSOCIATION.—We have been requested to state that all addresses and papers read before this Society, and referred to the Committee of Publication, must be in the hands of the permanent Secretary before July 31st next. The transactions will absolutely go to press August 5th, and all papers and addresses entitled to appear in the volume not received by July 31st can not be inserted.

All papers received by the Association and ordered to be published, and all plates and other means of illustration, shall be considered the property of the Association.

IN MEMORIAM.—DR. JOHN YOUNG KENNEDY was born in Northumberland County, Pennsylvania, September 29, 1792, and died at his residence in Acton, Indiana, July 10, 1882, at 4 o'clock P. M., in his ninetieth year, the cause of his death being cerebral embolism. After completing his academic course, he studied medicine under the venerable Dr. Physick, of Philadelphia, Pennsylvania, graduating from the University of Pennsylvania at Philadelphia, one of the oldest institutions of the country, in the year 1811. He enlisted in the war of 1812, and served as regimental surgeon under General Scott at the age of twenty-two years. After the war he practiced his profession in his native State (Pennsylvania) for some sixteen years. Emigrating West with his family in the year 1833, he settled in Shelbyville, Shelby County, Indiana, and practiced medicine for a long series of years, becoming

eminent as a physician and surgeon. Dr. Kennedy in early life was an expert operator, and was fond of the practice of general surgery, performing many operations throughout the State. His judgments were always excellent—he was painstaking and careful, so that his results were good. In the year 1864 he removed to Acton, Indiana, since when he has not been regularly engaged in practice. Dr. Kennedy was an affectionate husband and father, a reliable and warm friend, and a thoroughly conscientious, honest and truthful man. In person, he was small of stature, erect and commanding in his carriage, his manners courteous and dignified. His very appearance inspired confidence. His movements were quick and decided—indicative of his character. Although nearly four-score years and ten, his mind was strong and clear, his perception quick, and his judgment sound, up to within a few days of his death. I have known Dr. Kennedy for nearly six years, and our relations were closer than would be expected from the difference in our ages. From this knowledge of him I can conscientiously state that I never heard him make an unjust criticism on the course of another, or do what could be termed a mean act. His death can not but be lamented by all who knew him, and who could appreciate his worth. I know of no evil done by him, while few men have been instrumental in doing more good.

J. W. SPICER, M. D.

ACTON, IND., *July 27, 1882.*

DECEASE OF DR. NATHANIEL FOSTER.—This gentleman, who has been a practitioner of medicine, in Cincinnati, for over forty years, died Sunday, July 16, at 11 o'clock, P. M., and was buried in Spring Grove Cemetery Wednesday, P. M., at 3½ o'clock.

At a meeting of the medical profession called Tuesday afternoon, the 18th inst., to take action on the death of Dr. Foster, Dr. John H. Tate was called to the Chair and Dr. W. H. Judkins chosen Secretary. Besides these, the following physicians were present: Drs. David Judkins, Wm. Carson, A. E. Heighway, A. Rosenfield, G. W. Haile, A. Kemper, Thad. A. Reamy, J. A. Thacker, E. Williams, B. F. Miller, C. G. Comegys, J. P. Walker, C. D. Palmer, I. F. Barrows, G. E. Jones, N. P. Dandridge, Jr., John Davis, B. S. Lawson, J. H. Hazard, C. O. Wright, C. P. Judkins, Jno. Cleveland, J. Ransohoff, J. C. Culbertson, J. G. Hyndman, and W. H. Taylor.

Dr. Tate opened the meeting by stating its object. Those present were aware of the circumstances which had brought them together. A man widely known, an able practitioner, had been suddenly taken away from the community. It was but meet that they should pay a tribute of regard to his memory.

On motion of Dr. N. P. Dandridge, Drs. David Judkins, C. G. Comegys, and Andrew Kemper were appointed a committee to draft resolutions for the occasion. While these were being prepared several of the physicians present spoke their sentiments in regard to the deceased.

The Committee on Resolutions, through their Chairman, Dr. David Judkins, read the following, signed by the names of the committee and of the officers of the meeting:

"Dr. Nathaniel Foster, an honored and useful member of the regular medical profession, has been taken from his work to his reward. Dr. Foster has been actively engaged in the practice of medicine in this city for about forty years, and during all this service his conduct as a gentleman has been thoroughly maintained. He loved his work, and while possessed in an eminent degree of strong social character, with frank and genial manners, he never permitted these to interfere with his duty to the sick and suffering in his charge. In his intercourse with his professional brethren he was governed by and acted in accordance with the principles of an intelligent manhood, blended with which was that real courtesy of the cultured physician. Dr. Foster was not prominent in the mere showy phases of medicine, he was not ambitious of professional honors; had no craving for the fame that is thus acquired; his field was the sick room, and it was here that he had prominence: it was in this connection that he showed more than ordinary ability; to this he applied all his powers, reaping honorable success in life and leaving behind him an unsullied name. Dr. Foster was a Christian, a full believer in the doctrines of the Christian religion. He acted well his part in the battle of life, and in his death we recognize a loss to our profession, while we bow in submission to the will of God.

"*Resolved*, That we will attend the funeral services, and that a copy of this preamble and accompanying resolutions, signed by the officers of the meeting, be sent to the family of our deceased friend, and that a copy similarly signed be sent to the press for publication."

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ORIGINAL CONTRIBUTIONS.

The Avoidable Causes of Bright's Disease.

[Reported to the State Board of Health of Maryland.]

BY S. C. CHEW, M. D.,

Professor of Materia Medica and Classical Medicine in the University of Maryland.

It would seem, from questions often addressed to physicians, that there is a popular apprehension that Bright's Disease has increased in frequency of late years. But as the most common causes of the malady have long been in constant operation, and no new cause has lately been discovered, it is probable that the supposed increase is imaginary rather than real. Popular apprehensions are, however, not often entirely groundless; and in the present case, the cause of uneasiness is found in the fact that while there may be no increase in the number of actually existing cases, relatively of course to population, yet a greater number of cases is *known* to exist. Attention is now directed to the possible existence of the disease in its early and more insidious stages, in which it was formerly overlooked or unsuspected. And besides, symptoms which were once not supposed to have any connection with the kidneys, are now known to be expressions of this malady. More cases are therefore heard of, and hence the disease is naturally held to be more prevalent than formerly.

Prevalent enough it undoubtedly is, and it is not surprising that information should often be sought from physi-

cians as to its nature, its causes and the way of avoiding them.

It must be remarked that in strictness we should speak of Bright's *Diseases* rather than of Bright's *Disease*, since various affections, distinct in their origin and nature, have been grouped together in association with the name of Dr. Bright, having this in common that they are seated in the kidney.

In the same way several distinct affections of the lungs, tending, if unchecked, to the destruction of their tissue, are in a loose way classed together as consumption.

Some of these forms of kidney disease are dependent on causes which in the present state of knowledge seem unavoidable, beginning as they do with obscure and insidious changes that give no sign in their early stages. Such cases belong to what is technically termed the *amyloid* form of Bright's Disease, from *amylum* starch, in allusion to a starch-like substance, which in this variety of the affection is found deposited in the kidney and chiefly in its blood-vessels.

Others are due to influences in their nature avoidable, if constant guard could be kept against exposure to cold and wet, which often cause disease in the kidneys accidentally, so to speak, just as they produce bronchitis, pleurisy and other inflammatory affections.

Still other cases, and these perhaps the most frequent of all, result from causes that are perfectly avoidable and that in good sense and good morals ought to be avoided. It is the object of this paper to point out such of the more common causes of the malady as can properly be considered avoidable.

1. The first of the three classes spoken of need not be discussed here; for although much may be done by judicious treatment to relieve the symptoms accompanying this form of the disease and to prolong the lives of its subjects, yet its causes are probably in their nature irremediable. They certainly could not be made intelligible to the general reader unless he possessed a greater knowledge of pathology than could be imparted within the limits of this paper.

2. As to the second class of cases, almost every one knows from personal experience, in some degree, the dangers of exposure to cold and damp; and yet the exigencies of life are such that no perfect guard can at

all times be kept up against the incursion of inflammatory disease, and the kidneys may suffer as other parts do. The skin and kidneys hold such a relation to each other that when the function of the one is from any cause lessened, that of the other is in the state of health correspondingly increased. Within certain limits one is supplementary of the other; but if the action of the skin be too suddenly, or too extensively checked, then among other bad consequences the kidneys may become actively congested and inflamed. Now the starting point of many cases of Bright's Disease is found in just such congestion and inflammation, which if taken in time may be relieved by proper treatment, and the organs restored to the healthy state; but if neglected, they will issue in chronic and irremediable disease.

It is obvious that as the checking of the function of the skin has been the cause of trouble in the kidneys, the restoration of that function will be an important means of relieving the internal organs. Hence the use of the hot air or hot water bath, and other measures which cause the blood to flow freely in the vessels of the skin, and increase its action by promoting perspiration.

Cold and wet are thus to be regarded as causes—and they are clearly avoidable ones—of the first inflammatory congestion of the kidneys. But this inflammatory congestion, which may be the cause of chronic Bright's Disease, may, if treated promptly and actively, be relieved and prevented from developing further chronic changes; and thus it may be placed among the removable causes of the malady.

3. The third class is of great interest in the present connection, as embracing a very large number of cases, the causes of which are in general clearly traceable and perfectly avoidable. Among these causes, a most potent and widely acting one is the abuse of alcohol.

Now the way in which this agent may inflict damage upon the kidneys can easily be understood. Some years ago the question was much debated whether alcohol taken into the system was appropriated to the purposes of nutrition, or was eliminated unchanged; and as in the famous quarrel about the two sides of the shield, both parties were right. That is, a certain amount of alcohol, comparatively small in a healthy condition of the organism, and larger in depressed states of the nervous sys-

tem, such as exist in low fevers, may be entirely appropriated to the needs of the system, and thus act virtually as a food; while on the other hand an excessive amount, or the accumulated result of small quantities taken repeatedly and beyond the needs or appropriating power of the body, will be in part eliminated from it. The kidneys are the channel by which this escape is chiefly effected; and the constant passage of alcohol through these organs, in cases in which it is habitually used to excess, serves to develop in them a chronic irritation characterized by congestion, with thickening or condensation of their tissues, and resulting in one of the most common forms of Bright's Disease.

This casual relation of alcohol to kidney disease, which is thus intelligible on theoretic grounds, is abundantly confirmed by the professional observation of physicians. Every medical man is aware of the frequency of Bright's Disease in the intemperate.

It has been said that drunkenness is more common in Edinburgh in proportion to its population than in any other city in Europe. Possibly, this may be a slander on the fair fame of "Auld Reekie," but whether she is entitled to this proud pre-eminence or not, certain it is that John Barleycorn has many votaries within her purlieus. Bright's Disease is also very prevalent there, and it is stated by one of the most eminent of Scottish physicians, Dr. Christison, that from three-fourths to four-fifths of all his cases of this malady in Edinburgh resulted from alcohol, and occurred not only in habitual drunkards, but in others who, without being such, used alcoholic drinks in excess.

For the experience of most physicians will bear out the assertion that there are many persons, not drunkards in the ordinary sense of the word, and free from the moral delinquencies produced by grosser forms of alcoholic intemperance, who indeed would resent the imputation of drunkenness, but who, from the constant habit of using spirituous drinks too freely, are sufferers in greater or less degree from one or more of the physical evils which alcohol can inflict.

In the abuse of spirituous liquors we find therefore a prolific and perfectly avoidable cause of Bright's Disease.

How best to check the vast and growing evil of this abuse, is as important a problem as any that state medi-

cine may undertake to solve. Looking at the question as a physician, I am fully aware that there are frequent conditions of disease in which alcohol constitutes a most valuable medicine. But, while claiming to be free from the fanaticism so often imported into the discussion of this subject, I am equally well convinced, upon professional grounds, that when the good that distilled liquors are capable of doing is compared with the harm that they actually do, the weight of evil resulting from them is so vast and preponderating, that it were an inestimable boon to mankind if the art of distillation were irretrievably lost.

The system of *teetotalism*, so-called, has failed to effect the good that its well-meaning advocates have hoped from it, because it rests upon false principles, and thus begets a reaction against itself. If any individual thinks that by the self-denial of total abstinence he can aid others who have stronger temptations and weaker wills than his own, he may act wisely and charitably in rendering such aid. But no real advantage is gained by false statements; and it is false to say that for all persons the only rule of temperance is that of total abstinence. Doubtless it is so for some; for the chains of evil habit are by some more readily assumed and with greater difficulty broken than by others. Even so great a philosopher and so good a man as Samuel Johnson declared that he could refrain, but could not use moderately; and therefore with characteristic wisdom he did abstain entirely. Yet persons so constituted have no right to make their own infirmity the guide by which all others are to direct their course, and to say that, because they can not be temperate, therefore all others must be totally abstinent.

The moral aspect of this question is plain enough, and from the time when

Bacchus first from out the purple grape
Crushed the sweet poison of misused wine,

down to the present day, it has been copiously set forth in all literatures; but with less practical result than its importance demands.

"Who hath woe?"

sings a very old poet;

"Who hath contentions? who hath babbling?
Who hath wounds without cause?
Who hath redness of eyes?
They that tarry long at the wine:

Look not thou upon the wine when it is red,
When it giveth its color in the cup,
When it moveth itself aright;
At the last it biteth like a serpent
And stingeth like an adder."

Possibly good may be done by presenting more persistently the physical side of the subject, on the principle that material and tangible things make a stronger impression than those which appeal to the imagination and thus seem remote in their consequences.

Those who by professional knowledge and observation are prepared to point out and prove the destructive influence of alcohol upon the physical organism, may perhaps be the most successful preachers of temperance.

For however artfully a school of philosophy, represented by the interesting and ingenious Mr. Saunders in the *New Republic*, may inculcate the doctrine that there is no radical difference between moral right and wrong, and that the ideas of crime and sin are merely derived from association, yet a hob-nail liver or a degenerated kidney is an unquestionable evil, whose consequences are perfectly obvious, and lie directly in the path of all who use alcohol to excess.

But besides intemperance in drink, excess in eating may also be productive of disease in the kidney; and although not generally so rapid in its action, it may ultimately occasion as serious consequences as those resulting from alcohol. Errors of this sort are more in the line of the quantity than the quality of food, and are for this reason clearly avoidable. The way in which they may act is explained by animal chemistry.

During life, processes of repair and waste are constantly going on in the body, and the products of waste, being no longer fit for the purposes of the living tissues, must be gotten rid of. The carbon and hydrogen of this waste matter are separated to a great degree by the lungs and skin, which are very important excreting organs; and the nitrogen is removed in large part by the kidneys. But besides the nitrogen of tissue-waste, the supply of this material in the blood comes in part from the albumen of the food, into which nitrogen enters; and if there is too much from this source, the work of separating it falls also on the kidneys. Nitrogenous substances, such as meat diet, besides aiding in the making up of new tissue, impart a sense of energy from their stimulant properties,

and hence are often consumed in larger amount than is required. Now this excess beyond the needs of the system gives rise, under certain circumstances, to the accumulation in the blood of a product known as lithic acid, which is the direct cause of gout.

Or, again, the increased labor thrown upon the kidneys in removing such excess, keeps them in a state of too great activity, producing chronic congestion that may, and often does, terminate in Bright's Disease. Indeed, the connection between gout and one of the forms of organic kidney disease is well known to physicians; both affections being distinctly attributable to errors in diet of the sort referred to.

The kidneys will not fail in their office of removing the products of nitrogen waste, if too much is not required of them; but under excess of duty they may fare like a man who remains in perfect health with his ordinary full day's work, but if his task be increased by constant additional burdens, though he may stagger on under it for a while, yet sooner or later he must succumb.

The lesson thus taught by animal chemistry and enforced by medical experience is a very plain one. "Forewarned, fore-armed," is a good maxim; but while much may be done to relieve Bright's Disease, even when already established, yet in the case of so insidious an enemy, the best victory is to be found in flight, and the causes once known should be avoided.

Civilization in its Relation to the Decay of the Teeth.

Read before the International Medical Congress by Norman W. Kingsley,
August, 1881.

THE most important undetermined problem now confronting the dental profession is embodied in the inquiry made daily by anxious parents in substantially the following form:—"Why do my teeth decay more rapidly than my father's or mother's did, and why are my children's teeth decaying at an earlier age than mine?"

This inquiry does not come from those who neglect their teeth and who never consult a dentist until a throbbing pain betrays an exposed nerve. It does not come from the lower classes of society, the ignorant, or the depraved,

who are as habitually careless of their teeth as they are of every other personal attention.

It is not confined to any race or nationality, nor is it affected by the seasons, climates or locality; but it does come from a class which is the most intelligent, the most cultured, and the most finely organized in any community, irrespective of race, locality or climate, from people who appreciate the importance of hygienic laws, who give much care to the preservation of their bodily health, and who are attentive to their teeth.

This inquiry, when put to the professional adviser, frequently betrays great anxiety for the present condition, and alarm for the final results. It is useless to treat it lightly, or attempt a denial of the premises; for although the inquirer may have no statistics to sustain his impressions, he has a knowledge and a memory which is almost equivalent to a record, and his opinions are confirmed by the observations of most of his acquaintances.

The cases are exceedingly rare, if they exist at all, where the teeth of the children are sounder than the parents', and we must admit the conclusion that with each succeeding generation the dental organs are becoming more and more degenerate.

The dental practitioner holds the position of one in authority to his patients, if he be anything more than a mechanic, or makes any pretension to scientific attainments; but what response has he to their inquiries?

It is not difficult to formulate an answer that will satisfy many. It requires but little tact, and less knowledge, to give a reply that appears to impart information, but which really only covers ignorance and pacifies the patient. Even those who are well versed in other branches of science are often satisfied with an answer that will not bear investigation, and may even be absurd.

In this way is heard daily a repetition of the theories and speculations of a generation, which have just enough foundation in truth and just enough plausibility to escape being challenged.

Probably the most universal idea among cultivated unprofessional people of the cause of the decay of teeth, especially among children, is "candy." At least, nine-tenths of parents seem to think there is no other cause, and half believe that, with all their efforts to keep candy

away from their children, they must be eating it surreptitiously, or their teeth would not be found decayed.

There is probably no more fallacious idea so generally believed. How it should have obtained such wide-spread credence is difficult to conceive; it has just sufficient plausibility to save it from rejection.

But pure candy, in moderate quantity, never harmed any healthy child or adult. Pure candy, which is only sugar in a fanciful form, is as legitimate an article of diet, within moderate limits, as pastries, pickles or preserves, or a hundred other inventions for gratifying the palate, and if all other factors were eliminated from the problem, candy might be eaten with impunity.

Another speculation which has gained some credence is contained in the discovery that ice water, hot drinks or hot cakes are the cause of all the mischief. It was even gravely asserted, at a gathering of professional men a few years since, by a gentleman who had no mean pretensions to scientific acquirements, that the common habit among Americans of drinking hot coffee or tea, to be followed by ice water, caused a sudden alternate expansion and contraction of the enamel, which produced cracks, which ultimated in cavities of decay. It is very doubtful if a cavity of decay ever originated from that cause, and certainly it is not possible that such a cause can have any very considerable direct influence. Neither ice-water nor hot drinks is any perversion of Nature's provision for man's health or comfort.

If there are any pernicious results following their use, from which the teeth suffer, it is not in their directly causing caries or other injury to these organs.

Another favorite theory held by some professional gentlemen is that of "living upon soft food instead of that which requires mastication." It has a seeming plausibility from the fact that the principal tissues of the body become strengthened by the severity of their use, and are atrophied by neglect. But among the opposing arguments to this theory may be noted the fact that the Esquimaux living on whale blubber, the tropical Oriental with a rice diet, and the savage with his forest nuts, grains and dried meats, have each and all equally good masticating organs—the difference appearing not in structure, nor liability to decay, but in the abrasion of those which have the most severe use. Food has unquestionably a most important

influence upon the dental organs, but the benefits come not in the rejection of soft food and the substitution of hard. Neither is the "bran-bread" theory, which has been so persistently advanced, a much more solid foundation upon which to rest.

Bread made from unbolted flour, or that which contains the husk of the grain, possesses certainly more of the elements which go to make up healthy tooth-structure than where these elements have been eliminated. But mankind do not live upon bread diet alone, it forms but a small part of the bill of fare of the more luxurious classes, and it is very doubtful if the experiment were tried of feeding a family from birth to maturity upon bran bread, they would show any marked improvement in the dental organs, if that were the only means relied upon to produce that result. It savors of the experiment of feeding phosphates into the stomach, in the expectation of thereby making solid bones.

The food theories may be among the secondary sources of decay, but no one of them, nor all combined, form the primary cause of the present increasing degeneration of tooth-structure.

Still another theory persistently advocated by a professional observer, is embodied in the statement that "Contact always produces decay." That teeth frequently decay when they are in contact must be admitted; that they are more likely to decay at such points than in more exposed portions, is also borne out by every observer; but that contact is anything more than an incident to the real cause can not be shown. If contact be a cause operating independently of other causes, then are we confronted with the fact that a different, but equally independent and potent cause, is found operating upon another surface of the tooth where there is no contact; and, furthermore, an examination of the most solid dental structures ever presented for professional inspection, shows all the teeth in absolute contact, and no evidence of decay. This condition is also universally found in the jaws of savage races of good physique.

The contact theory must be relegated to its proper place among secondary causes, and simply a coincident factor in the great problem.

Another theory which has been ably maintained as the

sole cause of such vast destruction of dental organs, is the want of cleanliness.

This proposition becomes more forcible when put in the affirmative form—viz., that if the teeth are kept absolutely clean they will not decay.

It is not probable that so simple and so direct a statement, so broad, so comprehensive, and so complete, can be made embodying any other idea, or the different ideas which have been advanced.

It is upon the face of it unquestionably true, and would seem to prove that the converse statement of want of cleanliness was the real cause underlying tooth degeneration. But this is not true. Want of cleanliness is only a factor associated with many others to give it any potency. With all other factors eliminated, it is not at all likely that teeth would ever decay, simply because they were not cleaned.

The cleaning of teeth, as is now conducted with lotions and pastes, with powders, brushes, and silk, was unknown to the ancients, who were innocent of any thought of such a necessity, and besides we are even now frequently seeing perfect dental structures, which have never known cleanliness as at present understood.

Should we accept want of cleanliness as the sufficient answer to our inquiries, it would dispose of the necessity of any discussion of the agency of "Electrical Conditions," "Chemical Solutions," "Acid Secretions," "Fungi" or "Parasites," by whatever name they might be called; for whatever might be the agency, external and foreign to tooth substances, which was acting detrimentally, absolute cleanliness would prove the radical cure. Nevertheless, this most plausible of all practical theories is more important in its remedial character than as an explanation of the primary cause.

Each and all the theories thus far noted may be classed among secondary causes, any one of which may have some direct application in certain individual cases, but neither one, nor all together, reach the root and foundation of the difficulty.

"Climate influences" is the cause, says another, and still another, "Intermarriage, or the Mixing of Types." These terms, although not altogether meaningless, have probably, in the minds of those who use them, only a vague and indefinite relation to the subject. The more one re-

flects upon it, the less is he inclined to adopt the idea that climatic conditions are anything but a coincidence.

Climate, *per se*, can not possibly influence directly the disorganization of tooth structure; the changes from heat to cold, from damp to dry, from high barometer to low, do not in themselves affect tooth substance, no matter how frequent or how sudden. Nor does the prolonged continuance of any one of these conditions, with or without any of the others, produce any visible change. The inhabitants of the torrid and the frigid zones have equally sound masticating organs, and so have those of high altitudes, under a prevailing low barometer, as well as those at the sea-side, under the other extreme.

Districts may be malarious to the unacclimatized, and the whole system poisoned, but tooth-structure suffers, if at all, only as a secondary result.

Intermarriage, interbreeding, or crossing the different types of the human race, ought not to result in defective tooth-structure. Reasoning from analogy, in the crossing of different breeds of animals, improvement should be looked for and not degeneration.

Interbreeding among diseased, deformed, or unsound subjects, carries with it its own antidote, and would very shortly exterminate the race, but the fault would not lie with the principle involved, but with the subject chosen. Interbreeding, in its highest application and essence, involves that only sound and healthy subjects be brought together, and a superior quality, rather than inferior, is the natural result.

While this applies to structure, it may not be equally true of arrangement. The mixing of sound but inharmonious types, may result in deformity of arrangement, but not in disorganization or deterioration of structure.

Interbreeding of unsound and diseased subjects with the sound and healthy, is equally a perversion of and an abuse of the principle.

Other vague theories—used, often, without much understanding, but of general application—are formulated as “Constitutional Conditions,” “Violations of Hygienic Laws,” or “Hereditary Predisposition;” but the most comprehensive of all agencies, and the most intangible withal, which has been made sponsor for this growing curse of the human race, is—“Civilization.” What is civilization?—and what has civilization to do with decaying teeth?

Civilization means—out of barbarism, into refinement; out of ignorance, into knowledge; out of bondage, into liberty; out of privation, into comfort.

(*To be continued.*)

SELECTIONS.

Menstruation and Its Derangements.

BY ALFRED MEADOWS, M. D., F. R. C. P., ETC.

AMENORRHŒA must be carefully distinguished from *delayed menstruation*, since, though in the latter class of cases the menstrual discharge may not appear for many years, even after its usual time, yet it is a distinct condition, as will be seen later, from that of which absolute absence of all discharge at all times is the sign. The discharge usually appears for the first time at about 14½ years, but it is subject in this respect to almost infinite variety. In rare cases it is *never* established, and they called for particular and separate study. The diagnosis of amenorrhœa, however, is a comparatively easy matter. As its name implies, the presence of the condition is at once established by simple observation. The *cause* is another matter, and must be looked for in the condition of the organs implicated. Thus a mechanical obstacle may prevent the outlet of the discharge, in which case its progressive increase quickly reveals the true state of the case, for in every instance of true menstruation, *ovulation* is an invariable accompaniment, it is as invariably absent in every case of true amenorrhœa. Some inexplicable cases, however, must be admitted to occur; but in every instance of congenital defect, the subsequent unusual symptoms will be found due to the arrested development of the genital apparatus. Either the ovaries will have been arrested in growth, or the ovaries and uterus may both have shared in it; but, as a rule, there is a less degree of malformation than this, an imperfect kind of menstruation, small in amount, being possible to the organs. These cases admit of early recognition, and in them the ovaries can be proved to be the organs at fault. There are other cases in which the menstrual function, after

being duly performed, perhaps for a considerable number of years, may become arrested and entirely cease, as a consequence of some local and general and constitutional changes, the essence of which, Dr. Meadows' experience tends to demonstrate, is a blood-poisoning of some description. Thus, after blood-poisoning due to scarlet fever, arrest of the menstrua is by no means uncommon; and similarly, though less frequently, the same effect may be produced after measles, typhoid fever, and rheumatic fever. In all such instances the pathology is obscure, but the changes are probably due to *atrophy* of the ovary, and no hope of effectually remedying the condition can be entertained. Colds taken during menstruation are another cause of arrested function. Pain is a frequent accompaniment of these cases, in which, inflammation being induced by the exposure, trophic changes follow, producing a state of things for which it is futile to expect a remedy to be found.

The *cause* of all the menstrual irregularities above described is arrest of *ovulation*; the ovary atrophies, shrivels, shrinks up, becomes mobile in the pelvis, but usually out of reach, and assumes a senile appearance. Diagnosis is confirmed by cessation of function, and the clinical history forms an explanation of the cause of the change.

Treatment of amenorrhœa, under whatever form, resolves itself into treatment of ovarian atrophy; and hence the indication first and foremost is, to stimulate the sluggish action of the organ. Very few remedies, however, can be relied on to effect this result—if, indeed, any—and when the condition is consequent on blood poisoning, absolutely *nothing* will avail to produce any benefit. Tincture of cantharides, in ten to twenty minim doses, have been most efficacious in Dr. Meadows' hands, where remedies have not been resorted to in vain; and rue and savin have a reputation in the same connection. Iron will be of service when the constitutional state demands it, and blisters may be productive of some slight good. The most efficient agent, however, in any case of the kind, is undoubtedly *electricity*, and the method of applying it as a stimulant to ovarian activity has occupied the attention of several authorities. The late Sir James Simpson advocated the use of an intra-uterine galvanic stem, by the employment of which the uterus is excited, lumbar pains are produced, and a slight discharge is pro-

voked. This is certainly not a true menstrual discharge, since it possesses no ovarian character, and is not preceded by the excitement of ovarian activity to ovulation. Moreover, this mode of applying electricity is attended with serious risks, it being within Dr. Meadows' experience that it may be followed by retro-cellulitis and pelvic abscess, the stem in one case referred to having been removed with difficulty, and found to be covered with a thick membranous deposit from the irritated mucous membrane adjacent. Stimulation by galvanism for a short time daily has been adopted with better results, special bougies, sounds, etc., having been constructed to facilitate the passage of electrical currents to particular regions as required. Daily passage of sounds, introduction of sponge tents, and dry cupping, are other modes of promoting functional activity which are unscientific and extremely unsafe proceedings. By these means irritation of a kind is certainly set up, and a thin sanguineous discharge is provoked, but this is by no means *menstruation*, for, in the circumstances, the ovaries are not in the least degree affected, and without they are in active function ovulation and true menstruation can not take place. It is nevertheless possible to transmit the electric current directly through the ovaries, several plans having been suggested for thus exciting them to action. The patient may be placed in a galvanic bath, or the poles of a battery may be adapted to secure the desired end in various ways. The bath is to be preferred in many cases, and in conjunction with it enemata of rue and tinct. cinnamon on alternate days, for five or six times, may be advisable.

It is well to remember that obesity is a frequent accompaniment of amenorrhœa, and even plethora, the latter being more common in married women than in single. Also, the uterus varies as the general condition of the body differs, and the general treatment must be carefully directed on well-known general principles, in regard to such conditions.

In *chlorosis*, amenorrhœa is not, as is generally insisted, a *cause*, but a *consequence*, of the condition of the blood. To this is due the arrest of ovulation, and any attempt to restore the function must be addressed to improving the state of the blood, without any regard whatever to the generative organs pending essential changes in the circulating medium. These once brought about, menstruation

will be re-established without any special attention being directed to it. The digestive system, however, should be seen to.

Dysmenorrhœa in some of its forms presents characters analogous to those exhibited by amenorrhœa. It may vary wonderfully, from a large amount of discharge to a mere "show." As the amount of nervous excitation produced is to be taken as a measure of the ovarian act, it is evident that when this is scanty and abortive pain will not accompany it, the effect produced, or energy displayed, being too infinitesimal to bring it about. Nevertheless, as long as a discharge, however small in amount, is regular in appearance, there is good hope of restoring the functional vigor of the organ.

Scanty menstruation is commonly associated with obesity of figure, and sterility as a consequence of improper ovulation. Examination per vaginam of such cases shows that the organs generally are normal in form, etc., but that the ovaries are atrophic, and, as a rule, undiscoverable by the fingers in this position. The uterus may exhibit scarcely any alteration. In all such instances the diminution and cessation of the menstrual discharge are matters of time and degree, and are thus sharply separated from those in which total disappearance suddenly follows blood-poisoning. In case of gradual loss of function, emmenagogues may be found useful, but bromides and iodides are contraindicated when the signs are as above described. With them, however, electricity is signally serviceable, but must be frequently applied to secure benefit, the reason for this being that the remedy acts on a function which only recurs periodically, the ovaries and *not* the uterus being the organs implicated.

Entire *absence* of the generative organs is very rarely witnessed, only a single instance ever having come under Dr. Meadows' own observation. This was an infant which lived but a few minutes after birth: ovaries, uterus, and urinary organs were all wanting.

Rudimentary organs may be encountered. Thus, when the ovaries are abortively developed, menstruation will be very slight, and treatment must be directed to assisting the better development of the stunted organ. A rudimentary condition of other organs, *e. g.*, uterus, vagina, and especially the mammæ, usually goes with this condition of ovary when occurring congenitally.

The ovaries may be perfectly normal in all respects, and the uterus also, above the os, but from that point occluded. In such a case diagnosis will be simple if the vagina also is normal, for a globular, bulging tumor of increasing size will be found in the situation of the cervix, which needs only not to be confounded with pregnancy. The real nature of the case being understood, a trocar may be introduced for the evacuation of the uterine cavity, care being taken to preserve the vaginal wall from contact with the confined, acrid secretions.

Lastly, dysmenorrhœa may be due to occlusion of the vagina, necessitating operative procedure for relief. Here it must be remembered that true amenorrhœa has not been present, and precautions must be taken to guard against danger to the patient, by (1) evacuating the collection of fluid slowly, (2) excluding air from admission to the pent-up fluid, (3) freely injecting disinfectants into the cavity opened, and (4), by acting on the uterus with oxytocics.

Practical Notes on Neuralgia and Its Treatment.

THERE exists no better established nor more important fact than that neuralgia is a disease arising when the body is in a state of general debility. This is now more generally recognized than formerly, when pain was too often regarded as the symptom of what was termed "sthenic inflammation," to be energetically treated by low diet and depleting remedies.

As this disease is frequently mistaken for rheumatism, gout, spinal irritation, etc., and *vice versa*, it may be well to name some of the leading features of a typical case of neuralgia. 1. It occurs when general debility exists, is increased by fatigue, mental or bodily, but relieved by food and sometimes by stimulants. 2. The pain, which is sudden, darting and excruciating, exhibits remarkable intermissions, especially in the early stages of the complaint, and the constitutional disturbance is slight (temperature, pulse, etc., frequently normal). 3. It is usually unilateral. 4. As the disease advances tender spots (points douloureux) are formed in the course of the affected nerves.

That debility is a prime factor in neuralgia we have but to call to our remembrance cases which constantly

appear. The overworked, anæmic, badly fed girl suffering from neuralgia of the fifth, the anxious, struggling man in the early years of professional life or business, the married woman weakened by child-bearing or over-zealous in domestic cares, and the neuralgia of declining years, degeneration having set in, nutrition being defective. In our diagnosis we are assisted by the family history of the case, whether nervous disease in any of its varied forms has existed.

The treatment should be directed in every case toward improving the general health. Nutrition must be improved by very nourishing food, well masticated, and if stimulants are prescribed they should be given with food; pure air night and day; great cleanliness, and the use of sponging with sea-salt and water. Cod-liver oil and cream are of service, given after meals. Quinine in facial neuralgias, and also chloride of ammonium; arsenic in cases of angina pectoris; iron and strychnine in anæmic states. Bromide of potassium is useful in mild cases, where the pain is not severe, but a general nervous condition exists, with restless irritability. The subcutaneous injection of morphia, beginning with one-sixth of a grain, is the most speedy and useful remedy we possess, and is a curative agent; for it checks at once pain, and thus gives us the opportunity of carrying out all those constitutional measures for improving the general health, whilst it disturbs but little appetite and digestion, and with use a toleration is established, and appetite sometimes improved; for nothing is more apt to destroy appetite than the distress of severe pain. In chronic cases of neuralgia, a blister, not necessarily carried to the point of vesication, is often of the greatest possible service, and it is a treatment peculiarly adapted to old-standing intractable cases.

Having sketched the mode of treatment it is unnecessary to give illustrations of the ordinary cases which constantly present themselves in hospital and private practice. I therefore select from my note-book one of several successful cases where neuralgia has occurred in that period of life when a cure is rarely accomplished (some authorities say *never*)—the degenerative period.

In March, 1877, I saw, in consultation with Dr. Walker, of Wakefield, a lady aged seventy-six, who in early life had suffered severely from neuralgia of the stomach,

which had been much aggravated by the treatment then in vogue of insufficient nutritive food and depleting remedies. This patient was seized with violent pain, affecting the nerves of the scalp, and which became so excruciating as to deprive her of sleep for many successive nights. She became delirious in consequence, and we decided to inject one-quarter of a grain of morphia. This gave prompt relief and procured sleep. She was ordered turtle-soup, oysters, and an exceedingly nutritious dietary. She was well supplied with food at night also, which invariably relieved the pain. A mixture, containing half-drachm doses of aromatic spirit of ammonia and fifteen minims of tincture of nux vomica, seemed greatly to improve the appetite, which became prodigious and surprising. The tendency to degenerate was kept prominently in view, pure air was freely supplied in the bedroom, and every other measure taken to improve nutrition and the general health. As a local application, the chloroform liniment with tincture of opium relieved pain, and as soon as the case became chronic, the hair was cut closely and blistering fluid applied to the tender spots, which well developed in this case; multiple abscesses formed, and were frequently opened by Dr. Walker. The old lady, after an illness of three months' severe suffering, recovered perfectly, left Wakefield for Harrogate, and is now (1882) in fair health, having had no return whatever of her former complaint. Her body is feeble, but her mind extraordinarily clear and bright for a lady who has passed her eighty-first year.—*London Lancet*.

Professor Charteris on the Germ Theory.

* * * * DR. CHARTERIS, we notice, at the onset of his address, accepts Pasteur's experiments as elucidating satisfactorily the nature and treatment of a very important class of diseases—viz., acute zymotic diseases. We pass over, without further remark than stating our disbelief in the assertion, that tubercle is an infectious disease communicable by man to the lower animals, and of being reproduced in the human subject by the drinking of the milk of tubercular cows! Even if it were thus an infectious disease why should it matter if tubercle can be cured by three grain-doses of the hypophosphite of lime or soda,

or if the patient suffering from "galloping consumption" and tubercular peritonitis, can be rescued from the grave even, as it were, by "the skin of his teeth." Verily, we do live in startling times. If these statements be facts, they are surely among the mightier achievements of the nineteenth century! When are we to receive confirmatory testimony from *men of science*? Compared with the dubiety which surrounded the nature of zymotic diseases in former times, Dr. Charteris indulges the following pæan: "We live now in a different time, and we have stripped off much of the mystery which surrounded their course. We say that they are dependent on particular lowly organisms, that these organisms entering into the system, produce and reproduce themselves in numbers infinite, and possibly definite, in form. Their hostile inroad is marked by an unvarying period of incubation, and when this is completed they seem to awake to life. They then impair health, nullify animal vigor, and produce increased combustion and fever. Moreover, we can truly say, with reference to these organisms from which they originate, that like produces like, and that alone, and that a specific fever, the outcome of their multiplication on the human body, will retain its inherent characteristics, and never, however weakened the system, merge into another. Thus small-pox produces small-pox; scarlet fever, scarlet fever; typhus, typhus; and typhoid, typhoid;" and so on *ad astra*. This is the theory of the deservedly popular Professor of Materia Medica at the University of Glasgow. These wicked spores! Their conduct reminds one of the slumber, the rumbling, and final explosion of a Vesuvius or a Stromboli before it vomits its liquid death on the dreaming peasant of the plain below.

Applied to the elucidation of particular diseases, we are to believe that the germ of typhoid poison selects, as its manœuvre ground, a certain part of the intestine; that of typhus seizes on the nervous system; that of scarlet fever on the throat; of diphtheria the same part, but permeating and implicating the whole glandular system; that of rheumatism, the joints; measles, the skin; whooping-cough, the recurrent laryngeal nerve, and so on, *ad infinitum*. This is surely drawing on the credulity of any educated person to an extent that homœopathy never dreamt of. Against the theory, if it can seriously be entitled to the dignity of such a name, it appears to us reason-

able to urge, first, that the very existence of these germs has never been proved. Even Dr. Charteris himself admits "we can not place them on the microscope slide and say, 'Lo! there's the germ, there's the embryo of the races' fatal enemies;" and the Professor adds, with a complacency that is certainly not justifiable by fact, "But that they do exist no one attempts to deny, for it is the only logical conclusion to be drawn from the history of the maladies!!" Secondly, it may be urged against this precious theory, that it presupposes a peculiar germ for every different disease, and worse than all, their possession of a dreadful instinct for pouncing on the most vital part which plays havoc with the teleological argument of design—"That they do exist no one attempts to deny." Dr. John Dougall, who has devoted a good deal of intelligent attention to this subject, lecturing at the Royal Infirmary of Glasgow, exactly about the same time, remarks (see *Med. Press* Nov. 16, 23): "The chief points adduced by the germ-theorists in support of the malignant function of such minute organisms are—first, that they are present in all putrid, and absent in all fresh or healthy organic matter. Second, that many diseases, both of animals and plants, they allege, are caused by parasites and fungi. The *opponents of this theory, of whom I am one*, hold that all such organisms are the result of the morbid conditions of their *habitat*—First, because that, whether bacteria, parasites, or fungi, they are only found on the parts of animals or vegetables of lowered vitality, or in their dead tissues. Second, that by strengthening the vitality in living, or arresting decay in dead parts, they disappear. Third, that when present in infectious matter it loses its power to infect, as observed in small-pox and vaccine virus. On these grounds the functions of such organisms are *held as beneficent*," Prof. Owen terming them "Nature's scavengers," for maintaining the salubrity of our atmosphere, and "Nature's Invisible Police" for arresting the fugitive organized particles and turning them back into the ascending stream of animal life. Now, is it really necessary to ask any intelligent man to which theory he will profess adherence? Alas! who can decide when professors disagree! One startling assertion of Dr. Charteris we notice in conclusion: "It is possible, also, that against the germ which makes the name diphtheria a word of evil omen in every household, we have a

newly-discovered drug—pilocarpine, an antidote as potent, as some confidently anticipate, and all eagerly desire.” On what established observation is this based? The question is, Is pilocarpine an antidote against diphtheria in any degree whatever? Might it not be worth while that Dr. Charteris select a case of diphtheria and satisfactorily demonstrate this to, say, six intelligent men in the profession in Scotland? As for the rheumatic spore, and its death by the salicylates, it must fall in the same fell swoop. We have tried the salicylates and found them inert! We are sorry to have been called upon thus to notice Dr. Charteris’ address. For himself personally we have the highest regard; we only wish we could say the same for his theory.

The Duration of Isolation of Subjects of Contagious Diseases.

M. HILLAIRET, in the name of a Commission composed of MM. H. Roger, Bergeron, and Hillairet, read before the Academie de Medicine a report in reply to the inquiry addressed to the Academy by the Minister of Public Instruction, as to how long a pupil affected with a contagious disease should be kept away from school.

The report considered the following diseases: varicella, variola, scarlatina, rubeola, mumps, and diphtheria, and the conclusions are as follows:

Varicella, whose progress is often irregular, may require ten to twelve days for the fall of the crusts: The isolation should be about twenty-five days.

Variola has a prodromic period of three to four days; four or five days of eruption; three or four days of suppuration; desiccation requires three days; fall of the crust, six days. Then comes a period of furfuraceous desquamation without definite limit. Isolation should not be less than forty days.

In scarlatina the period of invasion occupies from six to forty-eight hours, or exceptionally three days; the eruption is completed in from five to eight days; desquamation commences on the fourteenth or fifteenth day, and lasts from fifteen to twenty-six days. Isolation should last forty days.

Rubeola has a prodromic period of three to four days;

exceptionally, from six to eight, or even twelve days; the eruption is completed in twelve or forty-eight hours, then it declines for twenty-four hours; desquamation lasts from eight to fifteen days. Isolation for forty days will be sufficient.

Mumps, as a rule, has a duration in ordinary cases of six days; convalescence lasts from six to seven days. If any complication of metastasis occurs, it lasts usually about nine days. Isolation for twenty-five days is sufficient.

The duration of diphtheria is very variable, but isolation should be maintained for at least forty days.

The Commission consequently proposes the adoption of the following measures:

1. Pupils affected with chicken-pox, small-pox, scarlet fever, measles, mumps, or diphtheria, should be strictly isolated from their comrades.

2. For small-pox, scarlet fever, measles, and diphtheria, isolation should not be shorter than forty days; for chicken-pox and mumps, twenty-five days is enough.

3. Isolation should last until after the patient has been bathed.

4. The clothing worn by the patient at the time he was taken sick, should be subjected to a temperature of 90° C. [194° Fahr.], and to sulphur vapor and then well scoured.

5. The bedding, curtains, and furniture of the sick-room should be thoroughly disinfected, washed, and aired.

6. The pupil of a school, after recovery from one of the above contagious diseases, should not be readmitted to the school unless furnished with the certificate of a physician that the above precautions have been observed.

These conclusions were adopted by the Academy.—*Gaz. Med. de Paris*, July 22, 1882.

Opacities of the Cornea.

THE literature of this subject is so meager and unsatisfactory that any original research, which might extend our knowledge of the nature and the causes of opacity of the cornea, would, very likely, prove generally acceptable. Opacities produced by precipitated metals, such as lead and silver, can not be entirely removed by any process

now in vogue, so as to restore anything like the normal degree of transparency. Practitioners should bear this in mind and exercise great caution in the use of solutions of lead and silver in the treatment of conjunctival diseases. Opacities from the cicatrization of ulcers and deep wounds, as well as that which follows interstitial deposit of lymph in parenchymatous inflammations, may be reduced to a minimum degree by the systematic use of tincture of cantharides, as practiced by Sichel. In cases of deep cicatricial opacity acupuncture produces rapid absorption of the opaque matters, and is followed by less irritation than usually attends the practice of tattooing. In fact, tattooing should not be done in cases where the opacity extends less than the entire thickness of the cornea. In carefully selected cases, it affords, when well done, great improvement to the general appearance of the eye, but it may prove disastrous if it be carelessly done. The application of powdered glass, of sulphate of soda, and sulphate of potassa, are too decidedly homœopathic in their similia to be entitled to any serious attention. If benefit ever followed their use, it must be regarded as accidental; and the reports of cure are so rare, and so sadly wanting in authenticity, the profession has well nigh universally come to consider opacities of the cornea incurable.

Osseus Tissue Formed from Transplanted Bone-Marrow.

PROF. BRUNS, of Tubingen, reports (*Arch. fur Clin. Chir.*, Bd. xxxi., Heft 3), the results of some experiments he has lately made on animals, with the object of determining whether portions of transplanted bone-marrow can give rise to the formation of deposits of true osseus structure. The Professor states that the animals best suited for experiments of this kind are young dogs. A portion of the shaft of the femur or tibia is resected, and the marrow contained in this resected fragment removed in an unbroken cylinder. Portions of this cylinder are then inserted into fresh wounds on the breast or back of the same animal, either into the subcutaneous fat or in a superficial part of the muscular layer. The wounds are then carefully closed by means of sutures.

The following changes, it is stated, take place in each instance of successful transplantation: A diffuse swelling

is at once formed, which speedily begins to diminish, and is replaced about the fourteenth day by a movable nodule, in which bony tissue already exists in scattered foci. By the twenty-fourth day, foci have usually amalgamated into a single piece of bone. Microscopical examination proves that the nodule, in its early stages, is composed of osteoid tissue, cartilage, and newly formed osseous tissue, and that the fully developed hard mass consists of true bone.

These experiments, Prof. Bruns asserts, prove that the bone-marrow, completely separated from its connection with bone, and transplanted under the skin of the same animal, at a remote part of the body, may give rise to the formation of bone and cartilage. The swelling at the seat of transplantation ossifies in part directly and in part by the conversion of cartilage and osteoid tissue into hard bone. The same process takes place in the formation of both the inner and outer callus after fracture; and it may be assumed that bone is formed from the inner surface of the periosteum. It is held by Prof. Bruns that in each instance the osteogenetic function is due to the same elements, namely, to osteo-blasts, which exist in the inner periosteal layer and are scattered among the elements of bone-marrow, particularly in young animals. Prof. Waldeyer, of Strasburg, who has examined these specimens, agrees in the view of the part played by the osteo-blasts in the ossification of marrow, and is not disposed to admit any participation in this process of leucocytes of the marrow, wandering leucocytes from the blood, metamorphosed fat cells, or newly-formed, spindle-shaped connective tissue cells.—*London Med. Record.*

Gastrotomy for Cancer of the Esophagus.

BY GEORGE R. FOWLER, M. D., OF BROOKLYN.

JANUARY 8, 1882, M. F. (male), aged 53, of German birth, and a workman in a varnish factory, applied to me with the following history: For four months past he has complained of shooting pains from epigastrium and left hypochondriac region to the throat; coincidentally occurred progressively increasing difficulty in swallowing other than liquid food, and emaciation. No history could be

obtained of syphilis; the patient had no knowledge of there being any malignant disease in his family. He had been an immoderate drinker of beer, but seldom indulged in spirituous beverages.

At the time of presenting himself for treatment, the patient was able to swallow but the smallest possible amount of food, and that with the greatest difficulty. The darting pains were increasing in severity. He had lost forty pounds in weight since the preceding August. Examination with bulbous bougie disclosed a stricture of the œsophagus, at a depth of 25 cm. from the prolabia. After several trials I succeeded in passing through the stricture and into the stomach a number 12 (F.) bulbous whale-bone bougie. The strictured point seemed to be 3 cm. in length. Numbers 15, 18, 21, 24, 27, 30, 33, 36 and 39 (F.) were subsequently passed successively, the withdrawal of the last number being followed by a slight trace of blood. The patient then drank a cup of milk with greater ease than he had swallowed for several weeks. He was ordered nutrient enemata, and to drink milk and brandy as often as every three hours, if possible.

A number 36 (F.) œsophageal bougie was passed daily for a week, when a new obstruction was discovered opposite the cricoid cartilage, which latter increased rapidly although the patient could still swallow liquid nourishment, and even raw oysters if well masticated. In view of the fact that the frequent passing of bougies and swallowing of food were irritating the growth in the œsophagus and leading to its more rapid development, the operation of gastrotomy was advised by me and accepted by the patient.

On January 17th, aided by my assistant, Dr. C. D. Beasley, and several professional friends, I proceeded as follows: Since the early morning the patient had taken, by my direction, four ounces of brandy in small doses. About five minutes before the administration of the ether, thirty drops of dilute hydrochloric acid in an ounce of water was administered to the patient, this being followed in two or three minutes by one ounce of a saturated solution of bicarbonate of soda. He was then brought rapidly under the influence of the anæsthetic, and, all antiseptic precautions being observed, an incision about 7cm. in length was made upon the left side of the epigastrium, parallel with the eighth rib, and a half inch below the

same, commencing near the junction of the costal cartilage of the seventh rib with the sternum. The skin, superficial and deep fascia and left rectus and transversalis muscle were successively divided. After arresting hemorrhage from all bleeding points, that from the vessels divided with the rectus muscle being particularly abundant, the transversalis fascia and parietal surface of the peritoneum were divided upon a director. The anterior wall of the stomach now crowded itself into the opening, owing to the distension of the viscus by the carbonic acid gas evolved by the commingling of the acid and alkaline solutions administered previously. The stomach was easily identified by the vena gastroepiploica and the fringe-like attachment of the mesentery at its greater curvature; the stomach being drawn out through the incision for this purpose. That portion just above the greater curvature, and which presented itself first at the abdominal opening, was then transfixed by two long steel needles, placed at right angles to each other, their extremities resting upon the abdominal walls. This served to steady the stomach, and dispensed with the services of an extra assistant at this stage of the operation. Interrupted sutures of carbonized silk were now passed through the entire thickness of the abdominal wall, including the peritoneum, and thence through the walls of the stomach in such a manner as to take in, at each stitch, a fold of the stomach-wall about two lines in width. A circular portion of the stomach, about 3cm. in diameter was thus included in a circularly arranged single row of thirteen sutures. I deferred opening the stomach until adhesions had formed between the serous surface of that organ and the parietal layer of the peritoneum, to which it was now closely applied. All the details of the Listerian method were strictly followed in the dressing. The patient rallied well from the operation, declared himself to be perfectly comfortable, and suffered nothing from shock. He was ordered a continuance of the nutrient enemata, and to take small portions of food occasionally by the mouth.

Upon the evening of the day of operation the patient suffered from violent fits of coughing whenever he attempted to swallow food; one-third grain doses of sulphate of morphia were required before the distress finally subsided, nourishment ordered to be swallowed only in the smallest quantities. The cough, however, re-

turned at intervals, and the patient's fear of its recurrence was so great as to prevent him from making any attempt at swallowing unless strongly urged to do so.

Five days after the operation the dressings were removed and the wound found to be in an aseptic condition. The abdominal parietes and walls of the stomach seemed to be adherent, and, as the silk sutures were causing some irritation, I removed them and completed the operation by making an opening in the stomach 5cm. long with a small tenotome. The long axis of this slight puncture was at right angles to that of the original operation-wound. A small tent of marine lint was fitted in the opening and a bandage applied. The patient did not take an anæsthetic during this part of the operation, and did not complain of pain when the stomach was punctured.

The course of the case, from the day of the first operation until the puncture of the stomach, had been almost a febrile, the temperature ranging in the neighborhood of 99° Fahr. Four and a half hours after the latter procedure, however, the thermometer registered 103°; in the course of twenty-four hours it fell to 99½°.

Attempts were now made to feed the patient through the fistula; no difficulty was encountered in doing this, but the sight and presence of the food excited the salivary secretions, and these, in turn, when attempts were made to swallow them, and even when they simply rested in the buccal cavity and fauces, produced such violent efforts at coughing that the fluids were forced out again, through the fistula. Ingestion of food could be accomplished only when the cough was not present, and its absence could only be insured by keeping the patient almost completely narcotized. When sputa was expectorated during the attacks of coughing, it was found to be streaked with bright blood. Under these distressing circumstances, very little could be done for the unfortunate man. The nutrient enemata failed to sustain him, and he sank and died of exhaustion, on the fourteenth day after the operation.

At the autopsy, made the next day, it was discovered that a cancerous infiltration occupied the whole circumference of the gullet, from a point opposite the cricoid cartilage downward for 10 cm. This had ulcerated through into the trachea, at a point opposite the bifurcation of the air tube, into the primary bronchi; the communicating opening at this point was 4 cm. in the vertical

by 2 cm. in the transverse direction; its edges were thin, ragged and irregular. The edges of the gastric fistula were rounded off evenly and smoothly; the wound in the abdominal parietes was healed; the adhesions between the parietal layer of the peritoneum and the serous coat of the stomach were easily broken down; in fact, their separation was not unlike the pulling apart of two layers of wetted blotting-paper. Nothing of this kind was observed during life, however, and no food certainly had passed into the cavity of the peritoneum. No traces of peritonitis, except such as were within the circle of sutures, were found.

REMARKS.—This must be looked upon as a successful gastrotomy, the patient, although perishing, finally dying from causes entirely beyond the control of the operation itself. The purposes and resources of the operative procedure were fully demonstrated. There are many points worthy of special comment in connection with the case, among which may be mentioned the following:

First. The entire uselessness of attempting the employment of dilating bougies in these cases of malignant disease of the œsophagus. The case under consideration illustrates this most forcibly. Here the attempt was made to dilate the gullet, in order that sufficient food might be ingested *per vias naturales* to sustain the patient while the different stages of the operation were being accomplished. It only resulted, however, although dilation was accomplished, in the more rapid growth of the disease, in the hastening of its breaking down into ulceration, and in the establishment of an œsophageo-tracheal fistula. That the destruction of so large a portion of the posterior tracheal wall, and the consequent pouring of saliva and putrid secretions from the ulcerated cancerous mass, into the air-passages, together with the exhaustion following upon the harassing, strangling cough, to say nothing of the fact that the efforts at coughing would force the contents of the stomach out through the gastric fistula; that this condition, with its long train of horrors, may have been due to the irritation of dilating the stricture, and the forced alimentation *per orem* subsequently, is a proposition to be fairly and squarely met. In my opinion, in a case of stricture of the œsophagus, with no history of traumatism, and in a patient at the cancerous age, except for purposes of diagnosis, no instrument other than the softest rubber

stomach tube should ever be passed along the diseased œsophagus; and I am not without doubt that the passage of food itself, when swallowed with difficulty, adds to the irritation, and so may lead to the more rapid development of the disease. Hence, the conviction is forced upon one, that, as the case progresses, and the difficulty of swallowing increases, the patient should be fed by means of a soft rubber tube, passed through the œsophagus into the stomach, this being supplemented by nutrient enemata, or suppositories.

The advantages to be gained by the operation of gastrotomy, as a measure of relief, or as a remedial agent, are next to be considered. The question will be asked, "Will this operation prolong the patient's life, and render his existence more tolerable?" To this question, in my judgment, there can be but one reply: To allow a patient to die the slow, lingering death by inanition, to which condition this disease slowly but surely leads, without offering him at least the chance of escaping its tortures is certainly unjustifiable; I had almost said criminal.

In the operation itself, as performed in this case, there are several noteworthy points. The adoption of Stephen Smith's suggestion of rendering the patient partially, if not completely, intoxicated with alcohol prior to operating, with the view of lessening the subsequent shock, was carried out, with what success the sequel proved. The statement that the patient suffered nothing from shock, is literally true. It will be noticed that all antiseptic precautions were adopted; this included the use of the spray. The introduction of the antiseptic method has, of itself, robbed the operation of many of its former terrors, an office it likewise performed for most operative procedures involving incision into the peritoneal cavity. Attention is called to the means adopted of inflating the stomach by means of carbonic acid gas, this being evolved in its interior by causing the patient to drink, first an acid, and then an alkaline drink. Similar expedients have been resorted to before by others, but by whom I can not now recall. The incision is that now usually employed, but whether this or any other method is followed, the rule to tie all bleeding points when practicable, and, in any event, not to open the peritoneal cavity until every particle of hemorrhage has ceased, and the wound is perfectly dry, should not be lost sight of. The success of nearly all in-

traperitoneal operations is now believed to consist mainly in leaving a clean peritoneal cavity behind. A single row of sutures, arranged so as to include about an inch and a quarter of the wall of the stomach, is now considered sufficient. In view, however, of possible instability of the adhesions, a double row would add but little, if anything, to the dangers of the operation, and, I think, would insure a better result. An especially noteworthy feature of the operation, is the adoption of the suggestion of Howse—a suggestion of most inestimable value—that of deferring the incision into the stomach until from five to ten days after the stitching of the stomach to the abdominal wall. There can be no doubt about the advisability of thus dividing the operation of gastrotomy into two distinct stages. Bryant, of Guy's Hospital, London, attributes the result in his last three cases—all of them successful—to the adoption of this method. It guards against the danger arising from the passage of the contents of the stomach between the sutures and into the peritoneal cavity, a very grave source of danger. It allows of the application of the strictest occlusive antiseptic dressing, and thus lessens very much the immediate danger of peritonitis.

Again, it will be noted that the opening made into the stomach was unusually small. I designed to have as small an opening as possible, believing, as Bryant insists, that the smaller the opening the more easily is the patient kept from being constantly soiled with mixed gastric juice and partially digested liquid food. The opening, in this case, however, grew to be larger than I had calculated upon, this, in great measure, being caused by frequent attempts to plug the opening with tents, in order to prevent the contents of the stomach from being forced out during the violent fits of coughing alluded to. In another case, I should first feed the patient by passing an aspirator needle through the stomach wall, and using this as a means of conveying food into the stomach.—*Annals of Anatomy and Surgery*.

Abscess of the Broad Ligament.

A LADY called upon me last summer, who, just twenty-three days before, had been confined. She complained of

a swelling of the abdomen. Her pulse was rapid and her pallor extreme. Her history was as follows: Four days after delivery she had a chill, and from that period she began to swell. She at no time had much pain, nor had she much to complain of now save her rapidly increasing size and loss of appetite. I suspected dropsy, and putting her on some simple remedies, I examined her urine. It was normal. She said she had never used stimulants. By waiting a few days, it was found her size increased by as many inches. My father, Dr. John Burke, saw her with me, and it was resolved to aspirate. The needle was introduced midway between umbilicus and the pubes on the middle line, and in the middle of a flatness which was distinctly localized, but which was of enormous extent. A thin pus flowed through the needle and it continued until we had drawn off two gallons of pus. The very courageous patient bore it all without flinching, and so great was her joy at being relieved that five days after the operation she got up, contrary to orders, and had another chill, when the abdomen commenced to swell again. I again aspirated, and drew off a gallon of pus of the same character. She was now put upon quinine in large doses and firmly bandaged. In aspirating a second time I could easily feel the walls of this abscess going down into the pelvis, and, when the fluid flowed more slowly, the needle on being pressed downward and backward caused the flow to increase. Two weeks in bed sufficed for a cure. There has been no return of the trouble up to the present time.—*Martin Burke, M. D.*

Chancre of the Lip and Epithelioma.

BY R. C. LUCAS, F. R. C. S., GUY'S HOSPITAL.

Two cases, illustrating the resemblance which these two affections often present, have lately been attended on the same day, and a careless observer, having regard only to the local disease, and ignoring the history and the age of the patients, might easily have fallen into serious error. Nor is the diagnosis always easy when no fact is omitted which might influence the conclusion; but in the two cases before us, despite the similarity in appearance,

there is corroborative evidence in each case which leaves no doubt as to the nature of the disease. One patient is a man about thirty years of age and unmarried. He has a thickening of the edge of his upper lip, slightly to the right of the center. In the middle of this thickening there is a superficial abrasion upon which the secretion and epithelium cake and scale. The whole lip is a little swollen, but if you pinch it between your finger and thumb you feel a hard circular rim to the sore about the size of a sixpence.

Now look at the other man. He is a respectable married man, upward of fifty years of age. He has a superficial sore on his lower lip, to the left of the meridian line. The surface is almost exactly similar to the other man's sore; it is cracked, and has a tendency to scab and scale. It, too, has a thickened rim, but if you pinch it you find the resistance less than that in the other case; but so similar are the sores, that if their positions could be changed, I do not think you would be able to distinguish one from the other. Yet, one is a cancer, the other the initial stage of syphilitic infection. How, then, can one distinguish them? First, the age and state of life make it probable that the young man's sore is a chancre, the old man's an epithelioma; but thirty is not too young for epithelioma, nor is fifty proof against syphilis, although with age impetuosity yields to discretion. Epithelioma below thirty-five is very rare. Last year I operated upon a man aged thirty-eight for a cancer recurrent in the cheek and glands of his neck, which had been operated on some time before in the country; but this is an exceptional case, and the age is of the greatest importance in aiding our diagnosis. Cancer occurs at the time when the tissues begin to wear out, and epithelioma especially is almost always traceable to long-continued irritation.

Next, the position is a distinguishing mark in these two cases, for epithelioma is rare upon the upper lip. The position of the sore upon the old man's lip is almost characteristic; it is just opposite the notch in his teeth made by his pipe. Further, he confessed to always having smoked an unwaxed clay. If mere contact with porous clay is sufficient after years to set up a cancer, you would conclude that there should be a corresponding sore on the upper lip; but the lower lip suffers most, for, owing to

the weight of the bowl, the lower lip is pressed upon as well as rubbed.

A chancre may occur upon either lip, as it results from the virus having come in contact with a chance crack. In many cases it will depend upon whether the person is underhung or overhung; for the lip most exposed is most liable to crack, and at the same time most likely first to meet in an embrace. Hunter maintains that neither the blood nor any of the secretions could convey the poison, but this is now known to be untrue. His reasoning on this point was most fallacious. If the blood, he argued, could produce syphilitic inflammation in a healthy wound, no object affected with constitution syphilis could escape from venereal ulcers; for every time he was bled or he scratched himself with a pin, the small wounds thus caused would be transformed into so many chancres. Hunter overlooked the fact that the man's tissues by the inoculation were protected, for the time at least, by re-inoculation, but that to another both blood and secretion might prove contagious. There is abundant evidence now of the contagious nature of the blood during the secondary stage, of the vaccine from a syphilitic infant, and of the pus from the secondary ulcers on the lips; hence there is no need to follow Ricord in his loathsome suggestions that these chancres of the lips were the result always of illicit contact.

The time during which the disease has been developing is another most important consideration in determining its character. The old man states that he has had ulceration, more or less, for five years, but that it is only during the last few months that the lip has caused him inconvenience. The other man counts his trouble by weeks, and gives six weeks as the time since he first noticed the sore. Five years is an exceptionally long history for so small a development of epithelioma, and it is very questionable whether the sore has been epitheliomatous all this time. Rather is it probable that had he left off the irritating cause two or three years ago he might have escaped from the disease from which he is now suffering, for doubtful ulcers distinctly traceable to local irritation will often heal when relieved of the exciting cause. It is now about two years since I saw, in consultation with Dr. Orton, of Kensington, an old gentleman who had been condemned by another surgeon for cancer on the inner

side of his left cheek. He was suffering from an ugly-looking ulcer with thickening edges, very like an epithelioma, but upon inquiring into the history we found that it had not been noticed more than six weeks or two months, and immediately opposite we found a tooth stopped with an irregular amalgam stopping. It was clear that the ulcer was excited by the tooth, and I suggested that the tooth should be extracted, after which the ulcer completely healed. Had, however, the irritating cause been allowed to remain for months, it is highly probable that the sore in this old gentleman might have taken on an epitheliomatous character, and the medical man who first saw him would then have been correct in his diagnosis. Thus the time is of great importance in separating an epithelioma from a simple ulcer and chancre.

There is a stage in both cases when the glands under the jaw will be found enlarged; and I remember two patients came last year with sore lips, both with short histories and enlarged glands, and I refused to give a positive diagnosis till I had had an opportunity of watching them. One of these developed a syphilitic eruption during the following week, while the other proved to be suffering from an epithelioma growing much more rapidly than the one we have now under consideration. Time will always settle the diagnosis; for it is seldom, unless the patient takes mercury, that the eruption of syphilis is delayed beyond two months. The man before us with a chancre has now upon his arms and trunk a few brownish papules, which place the diagnosis beyond all doubt.—*London Practitioner.*

Blood Enemata.

It occurred to my old and valued friend, Dr. Andrew H. Smith, of New York, that the artificially dissolved juices of flesh which we have hitherto employed might very probably be inferior to the perfectly fluid and wholly absorbable flesh which nature has prepared for us. In what other substance could we be so certain of finding all the elements of the blood as in the blood itself? Dr. Smith pursued his inquiries, and found that when *blood* was administered per rectum, both corpuscles and serum were absorbed. Three or four ounces of defibrinated blood having been injected into the rectum at night, no

trace was found in the evacuations of the following morning. An interesting observation was made, showing how absorption can take place from a surface much greater than that of the limited portion of the rectum in which the injection is first retained. A man under Dr. Smith's care in the St. Luke's Hospital, of New York, received every evening an injection of 120 grammes of blood. He was in the last stage of pulmonary phthisis, and died suddenly eight or nine hours after the last enema had been given. At the autopsy it was found that the large intestine was very evenly lined with a coating of thickened blood for a distance of nearly three feet. It would seem, therefore, that in the case of nutritive solutions administered by the rectum, there is a retrograde peristalsis, whereby the material is spread over a considerable extent of the absorbing surface of the bowel.

Now, as to the *mode of employment on blood enemata*. Ox blood is usually employed, but sheep's blood may be used. It is necessary that it be defibrinated the moment that it is drawn. Butchers understand this process, and will supply what is called "whipped" or "stirred" blood. It is, of course, requisite that the blood be fresh—that it be not kept more than a single day. In urgent cases, where there is no stomach digestion, two or three ounces of blood may be injected into the rectum every two or three hours; the fluid may be warmed by placing the containing vessel in hot water, but it is often borne equally well when cold. For chronic cases, in which it supplements stomach alimentation, it is administered in quantities of from two to six ounces once or twice a day. In some cases its use tends to promote constipation; in a very small percentage the opposite condition of irritability.—*Henry Sansom, M. D.*

Foreign Bodies in Alimentary Canal.

DR. E. FIELD, of Red Bank, N. J., writes:

"CASE I.—A few weeks ago, I was called in to see a female suffering severely from hæmorrhoids, with the following history: Had just been confined (child three weeks old, but had no trouble during gestation); ten days after confinement was attacked with a severe hemorrhage from the bowels and protrusion of hæmorrhoids. This continued for ten days, two or three times daily, accompanied

with pain, at which time she came under my care; had had no previous treatment.

"It was the third attack of the kind she had experienced, but the bleeding had been slight in comparison with the present one, and had been easily controlled; was always more or less constipated, going days without a passage.

"The hemorrhage continued in spite of treatment, the patient declaring she passed a quart of blood at each stool; in one she noticed some pus. The next day, in reducing the hæmorrhoids, which she was able to do easily, she felt something prick her finger, and after they were reduced felt a sharp pricking in the rectum; the following day there was pricking in the anus with the passage and upon examining the stool a pin was found bathed in pus.

"On the same day her courses came on and lasted three or four days, being the fifth week after confinement. Since that time (two weeks) the hemorrhage from the bowels had been very slight, merely a trace of blood with the passages, and the hæmorrhoids seldom protrude.

"The pin was an ordinary one, such as is used by ladies, was straight, and discolored. The patient tells me it was not expelled without some effort on her part; was pulled away with her fingers when she found the point protruding, and the pus was very tough, clinging to the pin. Nothing peculiar in any other particular about it.

"CASE II.—Was called hastily to see a child, eighteen months old, who had swallowed a thimble. The child, in playing about the floor, had placed the thimble in its mouth unnoticed by its mother. On raising her up she suddenly choked and the accident was discovered. To make matters worse, the father, upon finding that he could not remove, was advised to push it down, which he attempted to do. Upon examination I could feel the upper and smaller edge of the thimble in the fauces.

"The child was vomiting continuously. By careful manipulation and being blessed with an unusually long finger, I succeeded in passing below the thimble, turned it in the pharynx, slipped my finger into and removed a thimble an inch long, open at both ends. To the latter condition the child probably owes its life, as she could breathe through it readily. It was in the throat about forty-five minutes.

"CASE III.—A girl, seven years old, was picking her teeth with a bent pin of ordinary size, when by some mis-

fortune she swallowed it. Her father came to my office, saying she was suffering much pain. Being unable to attend the case immediately, I sent a brother physician. Upon examination, he found the pin low down in the œsophagus. While attempting to remove it with forceps, it slipped from his grasp. The child was immediately relieved, and so far has suffered no ill-consequences."—*Med. Record.*

Climatic Treatment of Phthisis.

IN a communication to *The Record*, Dr. R. B. Haywood, of Raleigh, N. C., states his doubts as to the propriety of sending consumptive patients to Florida and other debilitating climates. He expresses himself as being a convert to the views of those who, adopting a tonic plan of treatment, have with benefit turned the invalid current to the sea-shores of New Jersey. During his thirty-eight years of practice he has never sent a patient to Florida *with any satisfactory result*. On the contrary, he is convinced that the breaking down of the tubercle is hastened by such procedure. The climate of Florida, according to our correspondent, is exceedingly debilitating, miasmatic, and productive of complicating pneumonia. The country is subject to "northeasters," the temperature varies greatly from day to day, and insect life is particularly obtrusive and harassing. Experience, he claims, has taught him that the humidity, particularly where the air is free from impurities, exercises no baneful effect. Sea air is tonic, pure and medicinal. If there is an virtue in inhalations, he argues, the sea air breathed should also be of efficacy in view of the various ingredients of the sea water, which it carries with it—compounds of chlorine, sulphuric acid, lime, magnesia, phosphoric acid, etc. The effect of sea air is quickly manifested in elevating the tone of the system, increasing strength, and exercising a marked action in anæmia and general debility. For the last three years Dr. Haywood has been in the habit of directing his patients to go to Morehead City or to the town of Beaufort, latitude 34° 41', situated in the "bight" of Cape Lookout, N. C., and thirty miles from the hundred fathom line of the Gulf Stream. The sea breeze, we are told, is constant and delightfully tempered by the Gulf Stream. The

mean annual temperature is identical with that of the city of Rome, in Italy, *i. e.*, 61° . Raleigh, almost on the same parallel, shows a mean of 57° , and Asheville, still farther west, one of 54° . Havanese invalids often suffer from the cold as late as March 10th, and "northerners" frequently blow during half the winter. Two of the writer's patients who had sojourned at Morehead last summer express themselves as feeling almost entirely well, while a third was greatly benefited. After discoursing upon the facilities of this place, Dr. Haywood concludes by recommending it not only to consumptives, but also to the anæmic, uterine cases, to persons suffering from general debility, and as an abode for teething children.

Race in its Relation to Surgical Operations.

THE black races and the oriental nations sustain injuries and operations best; next stand the Anglo-Saxons; and, according to M. Chauffard, the Latin race is as far behind them as they are behind the black race. The immunity of the Chinese and Japanese to mortality after operations is remarkably shown by the various reports of medical officers serving in the East. It is stated that pyæmia is a rare occurrence among the *Chinese*, and in a recent report of 138 operations for lithotomy performed on persons of all ages and occupations, from two years old to eighty, but eight deaths occurred. A similar immunity is said to be enjoyed by the *Japanese* in regard to pyæmia, septicæmia, tetanus, and erysipelas. In our country, the *negro* has generally borne injuries and operations well, provided that he has not been exposed to the after vicissitudes of cold and dampness. This was remarkably shown in the experience of the negro brigades during the late American war. According to the observation of the writer, when these soldiers, injured in battle, were cooped up in overcrowded and overheated hospitals, they did well; when, however, removed to well-ventilated pavilion hospitals, and placed under such hygienic conditions as are most favorable to the white American soldier, they did badly, suffering severely from intercurrent pulmonic and other acute inflammations. The *Irish*, from their peculiar mental elasticity, also bear operations well, and so do the more phlegmatic *Germans*. The *American* is not

so good a patient; his activity of mind renders him restless and impatient of restraint; he looks anxiously forward to the end of his convalescence, and not infrequently ventures out of doors too soon, and thus hinders his own recovery.—*J.H. Brinton, in International Encyclopædia of Surgery.*

MICROSCOPY.

Recent Progress in Medical Chemistry.

BY WILLIAM B. HILLS, M.D.

DETECTION OF BLOOD-STAINS.

DRAGENDORFF recommends the following methods of manipulation in the detection of blood-stains.

Particles of dried blood are first removed when possible, and reserved for further examination, and the scraped spot is tested as follows:—

(1.) A small piece of filter paper is moistened with distilled water and pressed on the spot from five to thirty minutes. It is then removed and moistened with oil of turpentine, which has been exposed to the air, and a drop of fresh tincture of guaiacum. The blue color should appear within a few minutes. If no blue color appears, it will hardly be possible to detect blood by any other test. A blue color does not, however, necessarily prove the presence of blood.

(2.) A part of the spot is macerated in a few cubic centimetres of a cold saturated solution of borax at 40° C. The solution, which gradually assumes a red to reddish-brown color if blood is present, is examined spectroscopically for oxyhæmoglobine. It has been stated that red inks from cochineal, a coloring matter from the feathers of the banana-eater and purpurinsolphonic acid may be confounded in this test with oxyhæmoglobine, since they show similar spectra. The first may be distinguished by being decolorized by chlorine water without yielding a precipitate. The second does not give the spectrum of reduced hæmoglobine when treated with a solution of sodium sulphide (one in five). Purpurinsolphonic acid yields a spectrum only when the solution is hot.

(3.) The guiacum test is repeated with a small quantity of the borax solution, if the spectroscopic test succeeds.

(4.) A portion of the solution is diluted with five to six volumes of the distilled water, and a five per cent. solution of zinc acetate is added as long as a precipitate forms. This is filtered, washed, dissolved in one to two cubic centimetres glacial acetic acid, and examined spectroscopically for hæmatine.

(5.) A small quantity of the zinc acetate precipitate is dissolved on a slide in glacial acetic acid, treated with a crystal of sodium chloride, allowed to dry by exposure to the atmosphere, and examined microscopically for hæmine crystals.

(6.) A portion of the dried blood which has been scraped from the spots is tested for hæmine crystals, as under (5), and the guiacum test is then applied. A portion may be incinerated and the ash tested for iron. Nitrogen may also be tested for; if, however, the spots are upon iron, it must be remembered that ferric oxide may absorb ammonia and yield the nitrogen test. Wool, silk, etc., may also be sources of error. It is difficult to detect blood upon rusty iron, since the blood-pigment forms a compound with ferric oxide which is not easily soluble. A solution of borax at 50° C. will remove the hæmoglobine from this compound. This solution may be examined as previously described; or the rust may be removed with acetic acid, and the solution examined spectroscopically for hæmatine.

(7.) It may be of value to determine the size and shape of the corpuscles if the blood is fresh; but in partially decomposed or dried blood the results are unreliable, since the corpuscles are generally much altered. Thin fragments may, however, be examined under the microscope in turpentine, or some other liquid which does not act upon the corpuscles. After removing the hæmoglobine the residue may be tested for fibrine with an aqueous solution of iodine.

(8.) Hairs, fish scales, etc., often indicate the origin of the blood, and the blood of some animals when warmed with dilute sulphuric acid often evolves an odor peculiar to the animal from which the blood was derived. This is especially true in the case of fish's, pig's and cat's blood. Epithelium cells and sarcinæ frequently denote blood from the stomach, while that from abscesses contains fat,

pus corpuscles, and cholesterine. In cases of defloration epithelium cells and spermatozoa should be searched for.

(9.) It is not possible to determine exactly the age of a blood-stain. The older the stain the more difficult it is to extract the hæmoglobine. An aqueous solution of arsenious acid (one in one hundred and thirty) dissolves a spot one or two days old in about a quarter of an hour; one eight days old in about half an hour; one two to four weeks old in one or two hours; one four to six months old in three to four hours; one a year old in four to eight hours.

A solution of borax may be used to extract blood from soil. This solution may be examined spectroscopically, and 0.5 per cent. of blood may be detected in this way. Blood diluted with water may be precipitated with zinc acetate, when one part of blood in six thousand of water or in one thousand of urine may be detected.

According to Victor Schwarz, zinc acetate is to be preferred to tannic acid for the separation of blood from its solutions in well water, soap water, or normal urine, for the formation of Teichmann's hæmine crystals. For the solution of dried blood-stains upon linen the ordinarily employed potassium iodide is well adapted. The solution thus obtained is treated with zinc acetate. The spots may also be extracted by digestion for forty-eight hours at the ordinary temperature, with a cold saturated solution of borax; to the solution thus obtained zinc acetate is added as long as the precipitate appears colored; by further addition borate of zinc only is precipitated, which hinders or retards the formation of the hæmine crystals from the precipitate. Blood is best extracted from mixtures with sand, earth, and turf, by means of the cold saturated solution of borax; much less thoroughly by means of potassium iodide, since the blood solution obtained with the latter decomposes very quickly, so that after a few hours a blood spectrum, which at first is plainly visible, can no longer be detected. In opposition to an older statement of Wessel, the author has repeatedly succeeded in obtaining hæmine crystals from blood which had become completely decomposed.

According to Struve, the detection of blood is most difficult in those spots which have a very pale color, and which are only visible by means of the sharper contour of their edges. In such cases Struve treats a large piece

of the fabric containing the suspected spot in a suitable glass with a dilute solution of potassa. When the color of the alkaline liquid ceases to increase, the liquid is poured off and the fabric is washed with water. The solution thus obtained, which is usually turbid, is filtered, and to it a solution of tannin is added, whereby the liquid assumes a deeper reddish-brown color, and it is then made just perceptibly acid with dilute acetic acid. At once, or after some time, a more or less colored precipitate separates. This is collected upon a filter, washed, and two portions of it placed upon two glass slides. After the addition of a crystal of sodium chloride they are allowed to dry, and the blackish residue is then treated in the ordinary way with glacial acetic acid; in the one case with the aid of heat, in the other at the ordinary temperature. After standing quietly for some time, best from twenty to twenty-four hours, the hæmine crystals are sought first in the preparation formed with the aid of heat, afterward in one prepared at the ordinary temperature. In the former the crystals are found on the edge of the object glass, in the latter in the middle of the test; the last obtained result is decisive.

Struve calls attention to the fact that blood-stains may become so changed by mold that by the micro-chemical examination they will neither yield the hæmine crystals nor permit the detection of the structural elements. The color of such dark stains is not due to the blood-coloring matter, but to fibrine; they are soluble in dilute caustic soda, and the solution gives the different reactions for albuminous matters.

Curtmann has shown that when blood-sucking insects are killed stains may result in which human blood corpuscles are plainly recognizable. Bugs digest human blood more rapidly than mosquitoes do; in the former no trace of human blood can be detected after twelve hours, while in mosquitoes it can be easily demonstrated even later than twenty-four hours after ingestion.

Struve has re-examined the method suggested by Malinin and Schmidt for the diagnosis of blood-stains, which consists in heating them with thirty to thirty-five per cent. potash solution and measuring the corpuscles, in order to determine from what source the blood has been drawn. He finds that this method is valueless, because the blood corpuscles, after having been dried and then soaked with

potash, do not attain their original size, and no conclusions of value can be drawn from their measurement.

EXAMINATION OF SPERMATIC STAINS.

Vogel recommends the following method: The stain is softened with water, and in the moist condition is taken off with a knife, avoiding as much as possible the removal of any of the tissue on which it lies. A few small hairs are unimportant, however, as they are readily dissolved from the scrapings on the object glass or slide with a drop of concentrated sulphuric acid. After two minutes one or two drops of tincture of iodine are added, the whole stirred carefully with a glass rod, and covered with a large cover-glass, which, if the dark-brown mass be too opaque, may be pressed down a little, unless it be intended to transfer smaller portions to other slides. The spermatozoa are stained distinctly brown, and are visible under the microscope in their whole contour, but it is not possible to keep the staining in longer than twenty-four hours, unless the sulphuric acid be washed out, when the preparation is soon spoiled. Alcohol at once decolorizes the spermatozoa, showing the staining to be only superficial.

The Gesundheits-Amt; its Workers and its Work.

NUMBER 57 Louisen Strasse is a plain, substantial building, not differing in the least from ten thousand other plastered bricks in this city, and found by the stranger only by special direction to it. It is in fact an ordinary house, rented and used by the Gesundheits-Amt or Health Office of the State—a creation of Bismarck's within the last two years. Yet in this unpretentious building was worked and from it was published the discovery which marks an epoch in the history of our science; to-wit, the parasite of tubercle by Dr. Robert Koch.

When a year ago Dr. Finckelnberg was called away to take a higher place, no name seemed so prominent in this field among the younger workers of the land as that of Dr. Koch, then in practice at Wollstein, a little town about midway between Breslau and Berlin. He had already made a reputation in Parasiten-Kunde by his work upon milzbrand and the surgical infections, but it was confined chiefly to among his associates in this particular field of

work. It seemed, however, to Dr. Struck—Ober-Geheimer Medizinal Rath is his justly earned title—the present Director of the Health Office, that Dr. Koch was the man for the place, and accordingly hither he was called to take his place as a *Regierungs Rath* among several other workers in the field of hygiene or public sanitation. How fit the selection was has just been proven by the publication of the discovery of the parasite of tubercle, which implies the unveiling, we might say, of the greatest mystery of our age.

The *Gesundheits-Amt* here differs in its methods of work as widely as in its construction and arrangement from any ordinary health office in our country. Many poisons find their way into it, and many are discovered in it, but the poison of politics never pollutes its walls. Whether the Liberal or Conservative is triumphant, it will have no effect upon the occupants of this place. Hence appointments are permanent and are salaried, too lightly it is true, but nevertheless at such a rate as to relieve its employes, if such a term is proper, from the vulgar struggle for subsistence. Hence, too, its work is purely scientific, and the publications regularly issued from it rank at once as authoritative upon the subjects they discuss. The various rooms in the house are differently occupied by chemists, pathologists, etc., each having his own set of compartments and assistants. Just across the street is the *Charite*, whence to derive any kind of material for examination, and adjoining on the south is the large veterinary college with a full corps of teachers to supply material of its kind.

Dr. Koch's apartments proper consist of a suite of connecting rooms, a kind of flat, as it were, in which there are at present five workers besides himself. These workers are representatives, or, I might say, delegates, from different departments of the house or from foreign governments. For instance, there is one here now from the Saxon, one from the Hungarian government, and one from the German marine service. Each one, like Dr. Koch, has his own desk, separated from the rest by projections of shelves and drawers, as in a well-filled library, covered and filled with specimens and tools. Perhaps the most striking furniture of the rooms is the array of test tubes; by the hundred they are here, each partly filled with sterilized substances, gelatine or blood, and each stopped with a plug of cotton which has become brown in the pro-

cess of sterilization. The tubes contain the parasites of many known and described, and many as yet undescribed, diseases of animals, growing in the culture substance, and abstracted daily for inoculative experiments, or for further cultivation in fresh material. These tubes crowd the shelves and stands in every direction, but never in the least confusion, as each is distinctly labeled as to contents and date of preparation.

In the center of each worker's compartment, at a window, of course, stands, with all its appurtenances, a first-class microscope, mostly of the manufacture of Zeiss, of Jena, one only of Hartnack, of Potsdam, who has only now perfected his instrument with the oil immersion lens and Abbe illumination apparatus, necessary factors for this kind of work. A first-class instrument of this class costs here, I may add in a parenthesis, \$125 to \$150, Hartnack's being now just as good as Zeiss', and a little cheaper. This instrument so arranged is a *sine qua non*. Without it, it is not impossible, it is true, but it is not easy to define the bacilli of tubercle when but few are in the field.

These delegates, by the way, are not students of medicine in the ordinary sense of the word, nor are they practitioners, but men of science, all of medical science, of course, who expect to devote their lives to this kind of work. A mere association with this class of men is an education of itself, for it is the pure school of observation. Nothing whatever is taken for granted; nothing is inferred or deduced or reasoned out or speculated upon. Everything is simply examined and described. Dr. Koch is the referee in questions of doubt, and, so far as I have been able to see, he can determine any ordinary matter of doubt at a glance. For instance, two of us worked in vain a whole day over the tubercle parasites in a specimen of sputum, and finally in despair called him in. He noticed at once that the shade of one of the color tests was not correct, and at once declared that we had used an alcoholic instead of an aqueous solution, which was true, and which was the cause of failure. Of course there is nothing new or strange in this quick detection of the source of error, as it is the natural consequence of the study of years, of one, at least, with the same or similar reagents.

Work commences in the laboratory at 9 A. M., adjourns at 3 P. M. for dinner, is then resumed to continue until 5. But on Sunday the work ceases about noon. The Director

of the office makes a general assignment of the work, but each man is left pretty much to himself. So one man will be found engaged with tuberculosis, another with milz-brand, a third with the organs of some animal which has died at the veterinary stables, another with the analysis (not chemical, for this takes place elsewhere, but mycological) of drinking water, or of soil, perhaps, sent in from elsewhere, etc. To-day there is an interruption, as Drs. Koch and Gravitz have been sent to Wittenberg to study the etiology of an epidemic of typhoid fever which is just announced, but the work by the rest goes on just the same.

Just how this work is done, and with what result, I propose to write again. Only this much I ought to say now regarding the bacillus tuberculosis, namely, that it is a fixed fact, and is capable of the most complete and convincing demonstration. Dr. Koch was called before the Emperor, just before his departure to Ems, and I have it, from outside parties, that the deepest interest was shown in the demonstrations.—*J. T. W., in Phila. Medical News.*

BERLIN, June 25, 1882.

HOW TO DEMONSTRATE TUBERCLE BACILLI IN THE SPUTUM OF PHTHISICAL PATIENTS.—Baumgarten recommends the following method as more convenient than that employed by Koch, and as equally efficacious. A portion of the sputum is dried on a cover-glass, and then treated with potash—one or two drops of a thirty-three per cent. solution of caustic potash added to a watch-glass of distilled water. The tubercle bacilli can then be readily seen with a magnifying power of four or five hundred diameters, and a little pressure renders them still more distinct from the enclosing detritus of tissue. In order to preclude the possibility of confounding the bacilli of tubercle with those of other species, the cover-glass may be raised and placed aside until the layer of fluid on its under surface is dry, and then passed two or three times through a gas flame, and then on it may be placed a drop of an ordinary watery solution of aniline violet or any other nucleus-tinting preparation of aniline. All the putrefaction bacilli appear under the microscope as an intense blue or brown (according to the testing agent and its strength), while the tubercle bacilli remain absolutely colorless, and

can be seen with the same distinctness as in the ordinary potash preparation. The whole process does not occupy more than ten minutes.

GLEANINGS.

CHRONIC CATARRH OF THE BLADDER.—In April last year I was requested to attend an abbot, aged sixty-five, from whom I received the following history: He had been suffering for twenty-five years from chronic inflammation of the bladder; had made two journeys to Constantinople and one to Paris for the purpose of getting relief, but without any success. His condition was as follows: Constant desire to make water, compelling him to get up every half hour, and then only with great pain and straining being able to pass a few drops. Urine loaded with an enormous quantity of bloody viscid mucus, smelling most offensively. As he was unable to take any exercise I prescribed meat and wine, and enforced a vegetable and farinaceous diet, hot hip-baths every night, infusion of buchu with dilute nitric acid internally, and subcutaneous injections into the perineum to relieve the tenesmus. A persistence in this treatment for a month had the effect of improving the character of the urine, the mucus gradually disappearing, while the pain and frequency of micturition diminished, *pari passu*. Injections into the bladder were then tried of dilute nitric acid with belladonna, nux vomica in various proportions, and finally of sulphate of quinine, dilute sulphuric acid in the proportion of a drop to a grain in conjunction with nux vomica or belladonna in distilled water, of which three ounces containing eight grains of quinine were injected every day, leaving from one-third to one-half to be retained in the bladder. This was persevered in for more than three months, the diet being gradually improved and wine allowed in small quantity as the urine improved in character. Pain and straining in micturition slowly diminished, and as the urine became natural the power of retaining the urine increased, so that he has only to rise from sleep three times during the night. My attendance finished in September, and from that time no relapse has occurred.—*Wm. Hy. Cullen, M. D.*

MUSCULAR ACTION IN THE PATHOLOGY OF HIP-DISEASE.—In the July number of the *New York Med. Journal and Obstet. Review*, Dr. A. B. Judson, Orthopedic Surgeon to the Out-patient Department of the New York Hospital, discusses some points in the morbid anatomy of hip-disease, with special reference to the supposed effect of muscular contraction in promoting the progress of pathological changes in the articular structures. A careful review of the most important observations on record leads him to the inference that the crowding of the articular surfaces together by muscular action has no such effect. What mainly points to this inference is the fact that the primary lesions are not usually to be found in the superficial structures that enter immediately into the formation of the joint, but rather in the cancellous texture of the bones. This conclusion, however, casts no doubt upon the utility of the extension treatment, but simply leads to this interpretation of its beneficial action: Aside from the fact that we are compelled, empirically, by reason of its anodyne quality, to use traction; there is ample rational ground for its use. Traction, however applied, is unavoidably accompanied by fixation. The most efficient apparatus for the application of traction is, at the same time, the most efficient means known to surgery for the solution of that difficult problem, the immobilization of the hip-joint; and, finally, immobilization is indicated by every feature of the pathology as revealed in morbid specimens.

RESECTION OF THE PYLORUS IN ITALY.—This operation has just been performed for the first time in Italy, by Prof. Caselli, of the University of Genoa. The patient was a female who had been admitted to the hospital with symptoms which pointed to closure of the pyloric orifice of the stomach by a neoplasm presumably of a carcinomatous nature. In the operation itself there was no feature of particular interest, except the severe shock from which the patient suffered almost from the first incision. The time occupied was two hours and a half. To secure the stomach to the duodenum and to sew up the organ itself about fifty sutures were employed. The portion excised was elliptical in form, and measured four inches and a half in length by three and three-quarters in breadth. The operation itself in all its details was successfully completed, but the patient unfortunately sank from a shock a

few hours after removal to the ward. The necropsy confirmed in every respect the correctness of the diagnosis, and showed, moreover, that all the other viscera were perfectly free from cancerous infiltrations. The operation, therefore, was a thoroughly legitimate one. Moreover, from the excellent position in which the stomach and duodenum were found after death, there is little doubt that, had the patient's vital powers held out, the result would have been a most brilliant one.

TREATMENT OF ABSCESS OF THE LIVER.—Dr. Randolph Winslow, in *Annals of Anatomy and Surgery*, contributes an excellent article on this subject, and closes his paper with the following conclusions:

The following summary represents the results of my investigations in regard to the surgical treatment of abscess of the liver:

1. The liver should always be aspirated in a case of suspected abscess, in order to verify the diagnosis.

2. Many small, and a few large abscesses, have been cured by one or more aspirations; hence this method should always be employed at the first exploration, and we should then wait until it refills. If the pus collects slowly and in small amounts, it may be again aspirated; if quickly, and in large quantities, aspiration is not to be relied upon.

3. Incisions should be made into the abscess cavity at the most prominent portion of the tumor, whether in an intercostal space or not; and irrespective of the presence or absence of adhesions.

4. Rigid antiseptic precautions add much to the safety and certainty of a successful result.

5. When Listerism is impracticable, good results will be generally obtained by simple incision, or puncture by a trocar and canula, followed by the introduction of a drainage tube, and the daily use of carbolyzed injections.

6. Any of these methods are preferable to leaving the case to nature.—*American Medical Weekly*.

FRACTURE OF PATELLA.—Hutchinson maintains that separation of fragments depends upon effusion, which, perhaps, is most commonly a mixture of blood and synovia. Health agrees with this opinion, and does not hesitate to aspirate the knee-joint both in fracture of the patello and injury to the joint without fracture; he thus demonstrates that

the contents are principally blood during the first few hours and blood mixed with synovia later. If aspirated within a few hours of the accident the blood is still fluid and is readily withdrawn, but if allowed to coagulate the case will be tedious, for blood is more slow of absorption than synovia. Having emptied the joint, or before effusion, Health applies plaster-of-Paris bandage over an envelope of cotton wadding and makes the patient get about as soon as the plaster is dry, thus maintaining the tone of the muscles. Hutchinson keeps in bed for six weeks, from which atrophy of quadriceps may be anticipated.—*London Cor. Am. Practitioner.*

SIMPLE METHOD FOR THE CURE OF OZÆNA.—Dr. Gottstein (*Gazz. di Roma*) considers ozæna as a constant symptom of chronic coryza. There is no doubt that after the interference with the function of the glands there is a diminution and alteration of the nasal secretion. Part of it, drying rapidly, adheres to the mucous membrane, on which it forms crusts, and it is the decomposition of these which is the cause of the odor. It is, therefore, only necessary that a limited portion of the mucous membrane should undergo atrophy to give origin to an ozæna. In adopting this theory of ozæna it is evident that there can be no question of radical cure, since it can not be hoped that the secretion of an atrophied mucous membrane can ever become normally re-established. We must, therefore, be satisfied with the treatment of symptoms, which is the most simple and convenient for the patient. The author was led by chance to employ the following method, from which he has already, in fifteen cases of ozæna, seen the best results in less than three months. Dr. Gottstein commences the treatment with a nasal douche, which, by freeing the cavity from its secretions, permits the recognition of the character of the mucous membrane and the extent of the lesion. This is followed by the introduction of a tampon of cotton three-fifths centimetres long, which should remain in position for twenty-four hours. About an hour and a half after the introduction of the cotton there is a little secretion from the nose. When the tampon is withdrawn the secretion is found to be fluid and without crust or odor. Twenty-four hours can be allowed to elapse between two applications of the tampon. When both sides of the nose

are affected, the nose can be tamponed every twenty-four hours on the alternate sides. The tampons cause an artificial contraction of the cavities, and so increase the action of the secretions, which are absorbed as rapidly as they are formed, and their desiccation is thereby prevented.—*L'Union Medicale*.

MALTINE IN PHTHISIS.—Wm. Porter, A. M., M. D., says: "After full trial of the different oils, and extracts of malt preparations, in both hospital and private practice, I find maltine most applicable to the greatest number of patients, and superior to any remedy of its class. Theoretically, we would expect this preparation, which has become practically officinal, to be of great value in chronic conditions of waste and malnutrition, especially as exemplified in phthisis. Being rich in *diastase*, *albuminoids*, and *phosphates*, according to careful analysis, it aids in digesting farinaceous food, while in itself it is a brain, nerve and muscle producer.

"In practice, this hypothesis is sustained. A female patient at St. Luke's Hospital, age thirty-five, with phthisis, signs of deposit in left upper lobe, losing flesh for six months, poor appetite and night sweats, began taking maltine March 13, 1880. She now weighs 121 pounds, eats well, no night sweats, and the evidences of local diseases are much less marked.

"Another case of phthisis: A gentleman from Alabama, with all the physical signs of phthisis, rapidly losing health and strength. His was the remarkable gain of ten pounds *from six weeks' use* of maltine.

"These instances are sufficient for illustration, and are *duplicated many times in the experience of physicians everywhere*."—*Quarterly Epitome of Practical Medicine and Surgery*.

BILLROTH ON REMOVAL OF CANCER.—In the course of a letter from Billroth to Dr. Wywodzew, concerning the nature of the last illness of Pirogoff (a translation of which appeared in the *Boston Medical and Surgical Journal*), this great surgeon, discussing the propriety of operative interference for the relief of the cancer of the jaw, from which Pirogoff was suffering, says: "Interesting and instructive as the results of the microscopic examination are in such cases, and the etiology of the development anatomically so well illustrated, the diagnosis of cancer

in this case would not have influenced me to an operation. A man over seventy, of active mental habits, yet showing all signs of bodily marasmus, with a cataract in each eye, etc., has no possible chance of withstanding an operation such as I would have been compelled to make, even in order to prevent a recurrence for a very short period of time. My experience, of thirty years, as a surgeon, has taught me that those sarcomata and carcinomata which originate away back on the upper jaw can never be radically removed by operative interference, when one operates so as to provide for the probability of the patient surviving the operation. One is so disturbed in this region, partly by technicalities, part anatomically, that a true and total extirpation can not be made, save in those isolated cases where one has to do with an encapsulated tumor. I am no longer the bold, unterrified operator I used to be."

SCARLATINA.—Dr. J. A. Octerlony (*American Journal of the Medical Sciences*, July, 1882) basing his opinion upon the careful study of fifty-eight cases of scarlatina occurring under his own observation, advocates the theory of Eklund, of Stockholm, whose observations as to the parasitic nature of this disease he has repeatedly confirmed. In the urine of scarlatinous patients there is constantly present an immense number of peculiar cellular bodies which have received the name of *plax scindens*. They consist of sporodial cells, flat, oval, or round, and either colorless or yellowish-white; they have a distinct cell-wall, and a nucleus of a clear, brownish color. Sometimes the nucleus contains a very minute nucleolus. As seen floating about in the fluid examined, they often exhibit rotatory or screwing or seesaw movements. It has been observed that these little bodies multiply by division of the nucleolus, then the nucleus divides, lastly the cell itself undergoes division; mycelium filaments never develop from these cells, nor do they arrange themselves in beads or in the zoogloea form. These bodies are always found in the blood and urine of scarlatinous patients. —*Chicago Medical Review*.

WHEN DOES THE DANGER OF INFECTION IN SCARLATINA CEASE? —Mr. John Simon (*Lancet*, vol. I, 1881, page 146) says: "It is believed that the dispersion of contagious dust from the patient's skin is impeded by keeping his entire body (includ-

ing limbs and head and face) constantly anointed with oil, or other grease; and some practitioners also believe this treatment to be of advantage to the patient himself. When the patient's convalescence is complete, the final disinfection of his surface should be effected by warm baths, with abundant soap, taken three or four successive days, till no trace of roughness of the skin remains. Not until this has been done, nor without the greatest care that the clothes are clean, and free from infection, should the patient, however slight may have been the attack, be allowed to associate with persons susceptible to scarlatina."—*N. Y. Med. Times.*

PHOSPHOROUS IN INTERCOSTAL NEURALGIA.—Dr. Chas. D. F. Phillips (*Mat. Med. and Therapeutics*, 1882) has been using phosphorous in this affection for over twenty years, and has notes of fifty-six cases in which the pain quickly subsided under this treatment, and did not, so far as he knows, subsequently return. In some instances it succeeded where arsenic failed. The dose was 1-100 to 1-50 gr. thrice daily, doses which are sufficient to secure its full therapeutic effect. The same author also speaks highly of its action in phthisis, having employed it with marked success in over 800 cases. Although it will not cure phthisis it will in many cases arrest its progress, at all events, for a time. It improves the condition of the throat and voice, relieves the dry, harassing cough, and arrests the colliquative diarrhoea and night-sweating. Its use is not altogether free from danger, as when there is a tendency to hemorrhage it may induce hæmoptysis.—*Lond. Med. Record.*

DIGITAL EXPLORATION OF THE BLADDER.—Sir Henry Thompson's recent proposal to examine, by means of the finger, obscure and chronic disease of the bladder, hitherto inexplicable by sounding, etc., to which we not long ago called attention, is yielding valuable results. A patient who had suffered severely from cystitis and bleeding during three years, and without ascertained cause, was sent to Sir Henry from the country about three months ago, when the bladder was explored by the finger, after dilatation of the urethra, the patient being a lady. The outline of a considerable polypoid growth from the back of the bladder was easily defined, and at once removed by blunt-edged forceps. The patient is making a rapid recov-

ery. There has been no cystitis or bleeding since, in spite of exercise, walking and driving, daily.—*The Lancet*.

PRESCRIPTION FOR MEMBRANOUS DYSMENORRHOEA.—Dr. Wm. H. Mussey, of Cincinnati, Ohio, in the *Transactions of the Ohio Medical Society*, 1879, gives the following prescription for membranous dysmenorrhœa, which we have once before published, but which we are requested to republish:

R̄—Pulveris guaiaci resinæ,
Terebenthinæ Canadensis, aa ʒj.
Olei sassafras, f. ʒij.
Alcoholis, f. ʒvii.

Mix. Macerate for seven days and strain.

Then add—

Hydrargyri chloridi corrosivi, ʒj.

Sig.: Take twenty drops in wine or sweetened water, night and morning.—*Virginia Med. Monthly*.

IODOFORM IN GASTRIC ULCER.—Dr. M. J. Redmon (*British Medical Journal*, May 6th, 1882), having observed the rapidity with which external ulcers heal under the influence of iodoform, gave a marked case of gastric ulcer three grains of iodoform three times daily, in pill form. The hæmatemesis which had been persistent up to the use of the iodoform diminished, vomiting ceased, pain and tenderness decreased, and within a month the patient had fully recovered. The patient was a young unmarried woman, so it is possible that there might be an hysterical element in the case.—*Chicago Med. Review*.

CHLORAL HYDRATE ON AN EMPTY STOMACH.—Dr. Clemens (*Alg. Med. Central Zeitung*) holds the administration of chloral upon an empty stomach to be irritational. Nocturnal administrations as an hypnotic should be preceded by supper; in case of the presence of acid stomach or acid food, a solution of carbonate of soda should be taken. Patients using it should be instructed as to their diet. As a local application, glycerine and chloral. A saturated solution with glycerine is an excellent anodyne in severe toothache from dental caries.—*St. Louis Med. Record*.

RADICAL CURE OF VARICOCELE.—The intravenous injections of chloral hydrate is the latest suggestion for the treatment of varicocele. Dr. Angelo Negretto (London *Med-*

ical Record) reports two cases in which he obtained a speedy and permanent cure by intravenous injections of chloral hydrate. He uses a solution of chloral hydrate, seven grains to the ounce, and injects in several points in the mass. Mild orchitis followed in both cases, but within a week all signs of the operation and the varicocele had disappeared.

J. B. M.

VENEREAL WARTS.—A writer in the *British Medical Journal* has successfully removed these growths by powdering over the surface twice daily with equal parts of burnt alum and tannin. As these growths occur chiefly in situations where mucous or skin surfaces are in contact and moist, this plan suggested itself. In the first case in which he applied it, the warts were easily rubbed off in the course of three or four days, and other cases have given equally good results.

NERVINE AND ANTI-SPASMODIC.—The following is a favorite prescription in the Hospital for Chest Diseases, London. It is also useful in epilepsy, dysmenorrhœa, chorea, hysteria, and the like :—

R̄—Potassii bromidi,	grs. x.
Tinct. conii,	gtt. xxx.
Tinct. val. ammoniæ,	gtt. xx.
Aquæ camph.,	ʒj.

BOOK NOTICES.

THE CHANGE OF LIFE IN HEALTH AND DISEASE. A Clinical Treatise on the Diseases of the Ganglionic Nervous System Incidental to Women at the Decline of Life. By Edward John Tilt, M. D., past President of the Obstetrical Society in London. 8vo. Pp. 184. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co.

This is the fourth edition of Dr. Tilt's work, which is evidence that it has been well received. As it is so well described by the *Lancet*, of London, and we have received just as we are going to press, we will copy what it has said concerning it: "The work is divided into twelve chapters: the first five are, an introductory one on the physiology of the change of life, one on its pathology, one on its therapeutics, and one on its hygienics. Then follow

chapters which treat consecutively of the diseases of the reproductive organs at this period of life, of the diseases of the digestive organs, and of the skin; the tenth treats of the diseases of the ganglionic nervous system, and the eleventh, of the cerebro-spinal affections; and the concluding chapter is miscellaneous. Thus the subject of climacteric derangements is pretty nearly exhausted, and additional value is given to the volume by numerous interesting tables, which exhibit various physiological and pathological facts in a clear and definite manner.

"As the best work on the subject of which it treats, we can cordially recommend it to the profession."

Bound in stiff, substantial paper covers, price, 75 cents; in cloth, \$1.25.

CONTRIBUTIONS TO PRACTICAL GYNECOLOGY. Illustrated by Sixteen Wood Engravings. By S. James Donaldson, M. D., Fellow of the New York Medico-Chirurgical Society, etc. Part I.—Practical Observations Upon Uterine Deflections. Part II.—Practical Observations Upon Dysmenorrhea. Read before the New York Medico-Chirurgical Society. Paper cover. 8vo. Pp. 134. New York: J. H. Vail & Co. Cincinnati: R. Clarke & Co.

It is stated in the preface, that the work embodies the substance of two essays written for and submitted to the New York Medico-Chirurgical Society in April and May last. It has been the desire of the author, as he stated, to deal, in as concise a manner as possible, with fundamental practicalities only, and to avoid all obscure and elaborate speculation.

In Part I, devoted to practical gynecology, there is very much practical matter in regard to prolapsus of the womb, and the various flexions. The author has devised a number of instruments which he describes, and speaks of their fulfilling the purposes of their design in the highest terms. From his descriptions, we are inclined to regard them as important inventions; but, of course, it will require experience to demonstrate their utility. We have too little space to give an account of them.

The author discusses, at considerable length, the causes of prolapsus and flexions, making generally very logical conclusions. As with other writers, he classes constipation attended with unnatural and forcible defecation as

one of the causes of prolapsus uteri; and in treating this cause, he relates a number of novel cases. One is that of a lady, who came under his observation, who habitually had but one evacuation in fifteen days. He recommends, as a cure of constipation, punctual attendance given to the bowels at a determined moment daily, by the dismissal of every form of cathartic drug, discontinuance of the expulsive effort, a reliance upon the peristalsis, and by a regulation of the diet, all of which should be explained to the patient. A portion of rye-meal mush and treacle will, in a few days, relieve, he says, ninety out of a hundred. Add to this the appropriate remedies—*nux-vomica*, *bryonia alba*, etc.—and we complete the requirements, as he asserts. In the way of diet, for overcoming constipation, we have never met with anything so effectual as the eating of several raw apples every day, provided there is no contra-indication to their use.

In treating uterine flexions in Part II, the author challenges the medical world “to *cure* a uterine flexion of six months’ standing by the use of any form of vaginal pessary.” He considers, that the only successful mode of treating them, is by the use of the “uterine splint.” He describes one that he himself has invented, which, from the description, strikes us as possessing merit.

A great hindrance in the way of chronic flexions is the change that takes place in the structure of the tissues of the womb. At the point of flexion, especially, the circulation must be embarrassed, which would tend to produce hyperemia and fibrous exudation.

THE SONG LYRE. By J. C. Simonton. Cincinnati: H. L. Benham & Co., Arcade Bldg. Pasteboard Covers. Pp. 28.

This is a small musical work to assist teachers of music in giving instruction. It has a variety of music from easy to difficult, considerable of which is original. Also the words to the music are largely original, and of considerable poetic merit.

The work contains no printed instructions; it being expected that the teacher will furnish all instruction orally. It begins, however, with very easy exercises, which gradually increase in difficulty. We feel sure that teachers of music will find the work an improvement over the most of those generally in use. A primary object with it is not to take the teacher’s place, but to supply proper exercises.

EDITORIAL.

THE CINCINNATI COLLEGE OF MEDICINE AND SURGERY.—After a very long interval, during which, for sufficient reasons, we made not the slightest allusion to this institution, we make it the subject of a few remarks. We have been waiting for the results to take place, which we knew and predicted would happen, and have now occurred.

Some four or five years ago the *Cincinnati College of Medicine and Surgery* was in the most prosperous condition. A limited number of those who were at that time in the Faculty, had succored it from the very adverse condition into which it had fallen, after the decease of Dr. A. H. Baker, and made it second to none in the West. At the time mentioned, its lecture-rooms were well filled with students. Besides paying its heavy expenses, making large appropriations each session for improvements, and purchasing costly apparatus for the various departments for illustration, a sufficient fund remained in the treasury to enable a very respectable dividend to be struck off to the various Chairs. If a vacancy occurred in the Faculty, or was likely to take place, there would be a large number of candidates for the position, of eminent men of the profession who had a penchant to teach.

But there are a great many people who can not bear prosperity. If possessed of any talent and are useful at all, they are of more use in an institution when it is in a condition of adversity, or in medium circumstances, than when everything about them is flourishing. Such individuals at those times are apt to over rate themselves, and although they may not have aided at all to the thrift, rather hindered it, yet they are apt to become impressed with the notion that the thrift has been largely due to them, and their jealousy and hatred is immediately excited against those to whose abilities and industry the prosperity is due when there is a disposition to accord it to them.

The *Cincinnati College of Medicine and Surgery*, having attained to the high position we have mentioned, and that, too, notwithstanding it had to carry a number of "dead weights," who were great drawbacks to its progress, its friends began to congratulate themselves on its prospects. All were sure that it had entered upon a long

career of usefulness and that it would maintain a leading position; but there is a proverb to the effect that man only proposes, and has no part in disposing. So it happened with the College. While its friends were proposing constant, uninterrupted success for it in the future, a contrary result soon began. Parties who had obtained positions in the Faculty at its reorganization, under circumstances that seemed at the time unavoidable, for the chairs then were not sought for with the avidity that they were when the school seemed to have become established upon a solid basis, and who were, as far as their literary, scientific and medical attainments and professional standing were concerned, entirely unfitted for the positions, set up a conspiracy among themselves to obtain the management of the institution, putting either upon back seats or driving out altogether those by whose labor and talents the school had been built up. Conscious of their want of learning and scientific attainments, as much so as egotistical, selfish, ignorant men can be, but wishing to give the impression that they were the pillars of the College, they presumed that, as the school had now gotten into smooth waters, having secured a leading position and obtained a large patronage, there was no longer any work to do, other than the regular routine labor of lecturing to unsophisticated students; and such simple duties as those they thought they could easily manage, and so "cover themselves with glory," by obtaining the credit due to others. Having thus concluded, they set themselves to work to accomplish their *laudable* designs. Among the first acts of their programme was to fill the Board of Trustees with such individuals as would do their bidding without any inquiry in regard to any matter further than to know that they wished it. Consequently, they had elected S. S. Davis, Francis Ferry, and several other well-known ward politicians who were accustomed to serving friends. Their ticket was framed at a secret meeting, held for the purpose, and forced through at a called meeting of the trustees, when no one knew but themselves that it was intended to increase the members. New professorships were immediately created in the Faculty, and outside friends elected to fill them. Having then a majority in the Faculty, those who had built the College up were, by vote, put out of whatever executive offices they held in the Faculty, and put themselves in. Everything

was carried on with a high hand, until only they themselves and friends occupied the Faculty.

But to be brief and not occupy further space with these interesting, high-toned gentlemen, who proposed, in a most unblushing manner, to take possession of the fruits of other men's labor. They soon began to learn that, although all the battles of a medical college may have been fought, and there were no more enemies to vanquish—only instruction is to be afforded students who should present themselves in search of medical lore—an institution of learning can not be successfully carried on without learning and ability on the part of instructors, even though there be only teaching to be done. The patronage the school had been having, and which they thought would continue right on—yea, would even be increased by their new additions to the Faculty—commenced falling off immediately. They advertised most vigorously, sent out flaming announcements, secured all the newspaper notices they were able, but it was all of no avail. At each session the number of students diminished, and, as their matriculation list shortened in length, the number of dollars coming into the treasury lessened. With the first session held after securing control, dividends vanished. Subsequent sessions did not yield sufficient to meet expenses, and assessments had to be made. Then quarrels, bickerings, and resignations among the new members of the Faculty began.

Now, what has been the *finale* of the effort of these gentlemen to carry on a medical college without capacity or qualification of any kind on their part—gentlemen who are indebted to those whom they proposed to despoil of the fruits of their hard labor for whatever standing they ever had in the profession? At the close of the last winter session, every one of them handed in his resignation to the Board of Trustees, leaving the College entirely without a Faculty—not even a trace of one. They thus confessed that they had completely failed. When they got control by the most shameless means, the school, as we have stated, was in a most thriving condition—not only paying expenses, but paying very liberal dividends to the members of the Faculty. They left it owing the janitor for wages, owing large bills to mercantile houses for requisitions of the janitor. What a pretty mess have

they made of it! But we will draw a veil over the sickening sight.

Our readers, and especially the two or three thousand alumni, will undoubtedly be anxious to know what has become of the College. After an existence of over thirty years, all will wish to know if it is abandoned. We are happy to state, that Prof. R. C. S. Reed, who has long been connected with the school, and who did much to raise it to the enviable position it held before it fell into the possession of those who had near destroyed it, and who resigned his chair in the Faculty when those individuals had gotten control of it, with his characteristic energy has reorganized the Faculty, and the prospects are most flattering that the school will again be soon enjoying its wonted prosperity.

We have been favored with a copy of the Announcement for the session of 1882-83—the forty-eighth annual session—and we are pleased to find a good Faculty announced, embracing quite a number of the old members with whom the alumni of the school are familiar. The names of S. S. Davis and Francis Ferry, and some others, are not among the trustees. After serving their friends to the almost total destruction of the school, they can well be spared. They will abide in the *grateful remembrance* of the many alumni of the institution. The fees are published as follows: General Ticket, \$35.00; Matriculation Ticket, \$5.00; Demonstrator's (including material), \$10.00; Hospital Ticket, \$5.00; Graduation Fee, \$25.00. The session opens September 5, and continues until the end of February. Every advantage for instruction in medicine will be afforded as fully by this school as by any other college in the United States. Besides the clinical instruction to be had in attending the clinical lectures at the Cincinnati Hospital, one of the largest in the United States, a large and flourishing dispensary is connected with the college. At the close of the session, second course students have an opportunity of competing for the positions of resident physicians, at the Cincinnati Hospital, of which there are seven chosen the first of March, every year, by competitive examination.

We will mention that there will be no preliminary lectures, but the regular term opens at the time mentioned, with a full Faculty, superior to what it has ever been, for the reorganization has afforded the opportunity of leaving

out all "dead weights," who, to the detriment of the College, were filling important chairs. For announcement and all information, PROF. R. C. S. REED should be addressed. The speediest mode to communicate with him will be to address him at his residence, JONES' STATION, which is suburban to Cincinnati.

THE MODERN THERAPEUTICAL METHOD.—We not unfrequently read in the newspapers of an active business man, between sixty and sixty-five years of age, coming into his office or place of business complaining of heat and fatigue, and of pain or fullness in his head. He bathes his head and wrists, and while thus employed staggers to a chair and requests to be laid upon the floor, where he soon becomes unconscious. He is, and always has been, very temperate in his habits; has never engaged in excesses of any kind. On the contrary, he has always been noted for his rigid abstemiousness and his correct and regular course of living. But, as an active, energetic man, devoted to his profession, he has suffered great fatigue at times from over-exertion. We will further say that while heavy set, he is not given to obesity, is short in stature and short-necked.

In the confusion of the spectators of the evidently apoplectic attack which they witness, physicians are sent for. They one and all, however, do nothing, unless it may be to apply cold water or some ice to the head—may be not even that. The sufferer lies on the floor until an ambulance can be sent for, when he is placed into it and is driven home, a mile or so away. After he has been placed in bed in his own house, the physicians proceed to do something—we do not know what. May be they order leeches to the head. If they do, it is the only way by which blood is taken. But, by this time, will any of their administrations be of any service, so far as we may term the primary stage is concerned? Of course, if the patient should live so long, when the secondary stage begins, manifesting itself by fever and inflammatory symptoms, then probably the sedative treatment which is instituted may tend to be of use. But the inquiry is, When a physician is called to a primary case of apoplexy nowadays, does he render the patient any service; or would not the patient be as well without his attendance? We are aware that, according to the pathology of the affection, there is,

in apoplexy, a rupture of a blood-vessel from a weakened condition of its parietes, and, in consequence, a hemorrhage takes place into the substances of the brain; and, the theory is, the hemorrhage will continue, in spite of everything that can be done, until an amount of pressure is produced upon the brain to preclude further effusion of blood into it. As we can not place a ligature around the ruptured vessel, it is said we can not do otherwise than to wait until the resiliency of the brain tissue stops the bleeding. This theory, we will admit, is plausible—quite so. But it sometimes happens, especially in the practice of medicine, that what is correct in theory is not so in practice. Fifty years ago, when a physician was called to a case of apoplexy, he immediately rolled up the sleeve of the patient and made a large opening into the vein of the arm. If the symptoms were what would be termed alarming, he would open the veins of both arms, or even bleed from the jugular. What are the visible signs in a very large number of these cases? They are a slow but hard pulse, requiring considerable force to compress it; the carotids are turgid; the face is congested and swollen. Our forefathers in medicine seemed to think that if the force of the heart could be very rapidly lessened, that it would require less pressure in the brain to check the hemorrhage there. Filled as the skull is with brain tissue, when a rupture occurs in a vessel in it, the bleeding is not rapid but slow. Of course, it would be in proportion to the extent of the rent, but in any case it could not be active, like as if there was no obstruction. If, then, the hemorrhage would continue for half an hour, or an hour, at the force the heart was sending the blood into the brain, might it not be stopped in half the time, and a clot formed in the rent, if the force of the heart's action was greatly and rapidly reduced by venesection? for there is no means that will bring this about so speedily as venesection. In past times there is no doubt but that much harm was frequently done by the too indiscriminate employment of the lancet; for there are cases, now and then, when stimulants should rather be used.

We do not wish to write an essay upon the subject. We have not the space to spare in this number, even if we did. It has occurred to us, however, that a few thoughts expressed upon the subject might set some of our read-

ers to thinking, and lead to some beneficial results. We so frequently hear of eminent men, right in the midst of their usefulness, being struck down by apoplexy, followed by their decease, that it has seemed to us the profession ought to exert itself more in devising some efficient treatment. As it is at present, when an attack has occurred, it appears to us that the physician is certainly a very helpless helper. What he does in the first stage is of very little avail; and it is surely in this stage that the sufferer must be saved by treatment, if saved at all. It is during the first stage that the brain receives the damage that either kills or renders the individual a cripple and an idiot during the rest of his life, if he recovers—than which death is preferable—and of course it is of the greatest necessity that efficient aid should be rendered.

Our predecessors were exceedingly confident that their remedy of rapid bleeding did great service in saving the brain from injury. Were they egregiously in error? or are we mistaken in our belief that it is not a proper remedy in apoplexy?

LONGVIEW LUNATIC ASYLUM.—We had the pleasure of visiting this institution recently, and we were highly pleased with our visit. We have frequently visited hospitals for the insane, but we have never been in one that seemed to be managed so well in every particular as Longview under its present management. The whole house is a pattern of neatness throughout, as regards cleanliness. Not only were the floors and woodwork generally clean, but the bedding of the patients and their clothing—both that which they were wearing and that which filled their closets. An air of home-like comfort pervaded every ward, and all the inmates seemed in good health and spirits. We saw scarcely any that appeared melancholic. The general cheerfulness that prevailed would certainly do much to dispel anything like gloom. The choicest flowers were distributed throughout the wards, and birds were singing everywhere.

We regretted very much that the Superintendent, Dr. Charles A. Miller, was temporarily absent, but his highly intelligent wife did us the honor of showing us through the building and affording us very full information. We learned that there were about 630 inmates, about equally divided between the two sexes. The building was de-

signed to accommodate only about 400. However, as Dr. Miller manages, the inmates do not seem to suffer from overcrowding.

We expect soon to visit the institution again, when the Superintendent will be there, and then we will be able to present our readers with some interesting statistics, which we did not care about troubling his wife to supply, if even in her power.

We have not the slightest doubt but that, if very many of the patients had had as pleasant homes when sane as they have now in the institution, they would never have been attacked with insanity.

TROMMER EXTRACT OF MALT Co.—The extract of malt is now manufactured by not a few houses; and some of them boast not a little of their preparations. The Trommer Co., however, is a pioneer one, and it is largely from their preparation of it that the extract of malt has acquired the reputation it has—a reputation that has made it a standard remedy, even if it has not proven to be a cure-all.

Some time ago, we were informed by one of the proprietors, that the demand for their preparation was so great, they were under the necessity, with their then machinery, to work day and night, and, consequently, they were largely increasing their capacity by greatly increasing the machinery. But, notwithstanding the great demand upon them, they are unremitting in their personal attention to all the details of the manufacture, to maintain the excellent quality which has established the reputation of their preparation. We understand they have a large European demand.

They employ the very best quality of barley, and it is in this grain that Dr. W. Roberts states, in the *London Practitioner*, there is an “unlimited supply of diastatic power.”

DEATHS UNDER CHLOROFORM AND ETHER.—Two inquests have recently been held in the central district of Middlesex upon persons dying when under the influence of an anæsthetic. The first case was that of a male patient, aged forty years, who was about to be operated upon by Mr. Coulson in St. Peter's Hospital, Berners Street, for stricture of the urethra. After two drachms of chloroform

had been administered by the house-surgeon, the patient suddenly ceased to breathe and died in a few minutes. A post-mortem examination was made by Dr. A. J. Pepper, who stated that the heart was undergoing fatty degeneration, but that all the other organs were healthy. The deceased had not led a very regular life, and was at times addicted to intemperance. The second case was that of a woman, aged fifty-three years, who was admitted into the Middlesex Hospital suffering from cancer of the uterus, which caused obstruction to the bowels. Stercoraceous vomiting occurred three days after her admission. Mr. Henry Morris decided to perform colotomy, and a mixture of chloroform and ether was administered by one of the resident medical officers. After the patient had been inhaling for two or three minutes, she began to vomit, and then suddenly appeared to be choking and ceased to breathe. In both cases the usual efforts for restoration were continued for some time, but without avail. Verdicts of death from misadventure were returned by the jury.—*Lancet*.

PICTURE ANNOUNCEMENTS.—Several years ago the Medical College of Ohio began issuing their annual announcements quarto size, with illustrated cuts. We never for a moment presumed that such a style of announcements would become in vogue. We regarded it as merely the outgrowth of the high-pressure system of the Ohio College, which would be peculiar to them for awhile, and then be dropped by even them. But, much to our surprise, we have received an announcement of the *Missouri Medical College* which surpasses anything ever issued by the Medical College of Ohio as a picture-book. What college next year will endeavor to surpass this one? The medical colleges will soon be under the necessity of employing special artists to illustrate their announcements; and consequently will become great patrons of art. We would suggest to the next imitator the propriety of printing on the cover a large sunflower. We think a picture of that beautiful flower would be especially attractive, and convince every one of the devotion of the Faculty to æstheticism.

PETICOLAS' DIATOMS.—We have before mentioned the very beautiful preparations of diatoms by M. C. L. Petico-

las, of Richmond, Virginia. We have a number of test slides by him that compare very favorably with Moller's, while they are far cheaper. We would advise our microscopic friends who delight in (and who does not?) examining diatoms to try some of Mr. Peticolas' mountings. He lives where they exist by the thousands of millions, but collects from all parts of the world. A single slide of miscellaneous diatoms can be had of him for the low price of fifty cents, which will have on it many beautiful specimens. There are no microscopic objects so beautiful as diatoms.

ANOTHER SIGN OF DEATH.—*La Electricidad* announces a discovery which will prevent the horrible consequences of precipitate burials. The electric current affords a certain method of determining whether life is really extinct. Two or three hours after arrest of the cardiac beat the entire muscular system has lost its excitability. An electric current then passed through the muscles fails to call forth any contraction. If this procedure be adopted five or six hours after cessation of the signs of life, and no contraction is produced, death is certain, since neither fainting nor catalepsy can abrogate muscular contractility.

DECEASE OF DR. WILLIAM H. MUSSEY.—It is with the greatest sorrow that we announce the decease of Dr. William H. Mussey, which occurred Tuesday, August 1, at his residence in Mt. Auburn, about twenty-five minutes past five o'clock P. M. The cause was paralysis, following an apoplectic attack on the day before his death. Just previous to the attack, he had entered his office complaining of fatigue and heat. While examining a patient he spoke of suffering with severe pain in his head and called for cold water, and while engaged in bathing his head and wrists, becoming unable to articulate, he motioned to be laid upon the floor, and, when placed there, soon became unconscious. Dr. Falls, his associate, not being present, physicians were sent for, and as soon as circumstances permitted he was removed to his residence. Consciousness returned, we understand, so that he recognized friends; but he rapidly sank and died upon the following day.

Dr. Mussey was a well-known, eminent surgeon. Since the decease of his father, Prof. R. D. Mussey, and Prof.

Geo. C. Blackman, no one was more distinguished as a surgeon in Cincinnati than he. In fact, he ranked among the eminent surgeons of the country. If he had been a larger contributor to surgical literature, he would undoubtedly have attained to much greater fame, but he wrote comparatively little. Many persons, of not near the learning and experience, wrote a hundred pages to his one, and were, therefore, more prominently before the profession. He was possessed of a wealth of knowledge, derived from experience and reflection, which, if he had communicated to the profession at large very frequently, like many others, through the medical journals or by writing works, he would have secured far more brilliant fame. But he seemed to be content to have the respect of those about him, and to be regarded by them as a useful man. Beyond reporting some cases now and then in the journals, and occasionally reading a paper before a medical society, which would be published, he seldom appeared in print. He undoubtedly had the knowledge, as evidenced by his conversation, to have written lengthy, learned papers on scientific subjects of his profession.

Dr. Mussey was a man of sterling qualities—he was a man of principle in the fullest sense of the word. To say that he had no faults, would be to class him as more than human; but we feel quite sure that there was no one more sensible of his faults than himself. He acted from conscientious motives, and at no time would he compromise with his conscience, and do a thing contrary to his views of right. It has been well remarked of him that he was a man of *severe integrity*. We never knew any one to whom that expression was more applicable. While he was very far from being ungenerous or unsympathizing or uncharitable, no wrong-doing would receive any countenance from him. He opposed all sham and pretense in his profession, and insisted upon a literal observance of its code of ethics.

Dr. Mussey was a religious man, and lived a consistent Christian life. He was for many years a member of the Second Presbyterian Church of this city, and for the last twelve or fifteen years a ruling elder. The summons to depart from this life, though coming so hastily as it did, undoubtedly found him ready to go.

Dr. Mussey was born in Hanover, New Hampshire, September 30, 1818. He received an academic education in

his native State. When his father was appointed to the chair of surgery in the Medical College of Ohio in 1838, he accompanied him to this city, being twenty years of age. After engaging for a time in mercantile business, he turned his attention to the study of medicine, graduating from the Medical College of Ohio in 1848. After graduating, he commenced practice with his father, and continued thus associated until the spring of 1852, when he went to Europe for the purpose of more thoroughly studying his profession. He spent nearly two years there, residing in Paris the greater part of the time, in attendance upon the hospitals of that city. On his return home, in the fall of 1853, he again became associated with his father in practice, the partnership continuing until the infirmities of the great age of the father compelled him to withdraw from practice.

When the late civil war began, he offered his services immediately to the Government, and was one of the most active and valuable surgeons throughout its whole course. By his advice to the Hon. Salmon P. Chase, the Marine Hospital on Lock Street was fitted up by private contributions and turned over to the United States. He was active, also, in having established in Cincinnati a branch of the Sanitary Commission. He was commissioned at Washington as a Brigade Surgeon, and was soon after ordered for service to Gen. Buell's army. He was at the battles of Pittsburg Landing and Corinth. He was afterward promoted to the rank of Lieutenant-Colonel, and was appointed Medical Inspector. He was at the second battle of Bull Run and of Antietam and Fredericksburg. In the discharge of his office as Medical Inspector, it is said that he inspected every regiment from Washington to Florida. It can be well believed that in all of his trying duties he never shirked a duty.

At the reorganization of the Miami Medical College, in 1865, he took the chair of surgery and filled it until his decease. He was also, at the time of his decease, one of the surgeons to the Cincinnati Hospital. In 1864 he was elected one of the Vice-Presidents of the American Medical Association. After the close of the war he filled for a time the office of Surgeon-General to the State of Ohio. He was a member of the Natural History Society of Cincinnati, and contributed some valuable specimens to its Museum. He was at one time the President.

He was for a long time a member of the School Board of Cincinnati, at one time the President, and took a most active interest in the Common Schools of the city. The Public Library also owes a great deal to his labors. The very large library left by his father, to which he himself added very much, styled "The Mussey Medical and Scientific Library," he gave to the Public Library.

While other men, in consequence of having far greater wealth than Dr. Mussey, for he was not rich, have given more money to be expended for public purposes for the benefit of Cincinnati, yet the city never had a more valuable citizen than he. Besides the valuable library mentioned, he has left behind, for public use, the extensive anatomical and pathological museum, which belonged in the first place to Dr. Shotwell, and, at his death, was secured by Dr. R. D. Mussey and passed into the ownership of Dr. William H. Mussey. In addition to these gifts are his services for the public welfare, running through many years, which we only have had space to barely allude to.

On the decease of Dr. Mussey a number of organizations called meetings and took appropriate action. Among them were the members of the medical profession of the city, the Faculty of the Miami Medical College, the Alumni Society of the College, the School Board, employes of the Public Library, etc. We have only space to publish the action of the medical profession.

The meeting of the profession was held on the afternoon of August 3. The attendance was very large. Dr. John Davis was elected Chairman, and Dr. McReynolds Secretary.

Drs. George Connor, Tate, and Keyt were appointed a Committee on Resolutions. In their absence letters were read from Drs. Falls and David Judkins. Remarks eulogistic of the life, labors, and character of the dead surgeon were made by Drs. Walker, Williams, Taylor, Young, Tate, Judkins, and others.

The following resolutions were adopted:

WHEREAS, Our friend and brother, Dr. William H. Mussey, has been suddenly called from his labors on earth; and

WHEREAS, In his character we recognize many of the finest traits of human nature—characteristics that command our warmest admiration—it is a privilege, and even a pleasure, on this sad occasion, to bear testimony to them.

His career as a successful, painstaking, and laborious practitioner, and liberal, public-spirited, and patriotic citizen, is known to all. For in the

daily walks of his vocation, in the hospitals and medical college, the army, the Board of Education, and Public Library, as well as the various scientific societies, he made his mark, and well earned a reputation for zeal, industry, intelligence, efficiency, and liberality. In a word, we may say of him, as a man and a professional brother, that he has filled out well the measure of his days, and has left behind him a noble example, which well may be followed by us all. Therefore, as an expression of the sense of this meeting, be it

Resolved, That in the death of Dr. William H. Mussey the profession of medicine has lost a distinguished, enlightened, honorable and loyal member, and the community a highly valuable citizen.

Resolved, That our sincere sympathy is due, and is hereby expressed for, his wife and family.

Resolved, That the usual publicity be given to these expressions of our esteem and regret.

J. H. TATE,
GEO. CONNOR, } *Committee.*
A. T. KEYT,

DEATH OF PROF. F. M. BALFOUR.—We learn from the *Medical Press* that this quite young English scientist is dead. The circumstances surrounding his death are particularly mournful. He had gone for a few weeks' relaxation to Switzerland, and while climbing the Alps with a guide for companion, is supposed to have slipped and fallen; at any rate, his dead body and that of the guide have been discovered, but the particulars of the accident must of necessity forever remain unknown. The late Professor, though but thirty years of age, was the most distinguished graduate Cambridge has had since the time of Clifford, and in his own special field of embryology he was without a rival. The work he has already accomplished is a vast addition to our knowledge, and, thanks to his indefatigable industry, is embodied in a connected work which renders it accessible to every student. It will be impossible for Cambridge, even out of the rich store of distinguished scientists numbered among her own graduates, to replace the Professor thus prematurely deceased, and the loss experienced also by the world of English science is one that can not at present be made good. Mr. Balfour's work, however, is his best memorial, and in the influence exerted by it on future progress he will continuously, though dead in body, be alive and active in spirit, to the unutterable gain of the science he so loved and served.

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ORIGINAL CONTRIBUTIONS.

Civilization in its Relation to the Decay of the Teeth.

Read before the International Medical Congress by Norman W. Kingsley,
August, 1881.

Continued from last number.

CIVILIZATION expands the intellect, represses vice and savage instincts, cultivates virtue and noble aspirations, encourages the growth of the emotional nature, and enlarges the domain of human sympathy. Civilization includes a life of luxury and ease, the accumulation of wealth, the development of the arts, and the gratification of the appetites and the æsthetic tastes. Civilization defies and controls the elements, organizes commerce, builds cities, railways, telegraphs, and factories, and brings to our vision the most infinitesimal organisms, as well as the mighty worlds of boundless space.

Civilization is the divinely-appointed method through which mankind derive their greatest blessings, and by which they reach their highest possible state of intellectual, moral, and social development. Through civilization is to come the grandest achievements of the race, the possibilities of which are so much greater than have even been conceived, that if now presented to the mind they would be regarded as proceeding only from the Infinite; and only through civilization will the millennial, or ideal, existence of the human race ever be attained.

Civilization, therefore, is a normal condition of mankind, entirely consistent with perfect health and development, and is the agency of evolution from a lower to a higher

grade. Nevertheless, while civilization thus contains within itself the elements of the highest attainable finite perfection, it is made the author of nine-tenths of the disorders which now affect mankind. In the rude and barbaric state disease is as uncommon as among the brutes; the sickly and feeble must go to the wall; the fittest only can survive. But with refinement and culture comes enlargement of human sympathy, and the weak and suffering are cherished with fostering care; the sickly child is nurtured tenderly and carefully into manhood, to become the progenitor of a tainted family, and the seeds are sown which bear fruit for generations.

Civilization is not responsible for the disorders of civilized communities; but disease, deterioration, degeneration, and decay, arise from the neglect of, or abuse of, the resources, the agencies, and the products which civilization brings. Crowded communities, filthy abodes, vitiated atmosphere, hunger, privation, and exposure—among the lower classes—breed diseases which sap the foundations of life. But neither of these, nor all combined, tends to produce the disastrous effects which follow the habits and mode of life of the more intelligent, the more wealthy, and the more cultured classes.

The increasing tendency to the degeneration of the dental organs of these days, and which has now become alarming, is exceptional among the lower classes, while they remain in that class; it becomes distinctly marked when, by the accumulation of wealth, they are enabled to adopt the practices of the higher classes, and thus become subject to the same deteriorating influences.

Caries of the teeth is only incidentally connected with the diseases which prevail among a class inured to constant physical labor, whose minds are fully occupied in solving the question of daily bread, and who are content when food, clothing and shelter are provided. Fevers, inflammations, or epidemic diseases, do not, necessarily, cause teeth to decay. People are constantly passing through these various complaints, and the teeth remain intact. But, passing out of this condition in life, into the more refined and luxurious, we find physical labor exchanged for mental; strain of mind takes the place of strain of body; muscular tension ceases, the nervous tension takes its place; the vices of luxury supplant the virtues of privation; the individual, no longer content

with having satisfied his daily wants, enters the struggle to obtain a higher place in the social scale, to accumulate wealth, and to be envied by his former associates.

Refinement and culture create new ambitions, new responsibilities and new anxieties. Every added anxiety brings an additional mental strain. The mind—and the mind only—is constantly on the alert. The brain has no rest. Nutrition of muscles and bones is diverted to repair the undue waste of nervous tissue; and sooner or later come, inevitably, to parent or offspring, the long list of nervous diseases which now so threateningly confront us. The testimony of the most distinguished neurologists—especially in America—is uniform and undeniable, that diseases of the brain, the spinal cord, and the nerves which issue from them, or the sympathetic system, are alarmingly on the increase. The causes which tend directly to produce such results are more potent, and more active, in the Northern United States than in any other locality upon the face of the globe.

Causes and results which might pass unnoticed in other localities, from their infrequency, are there exhibited in their most pronounced forms; and thus better opportunities are then afforded for the study of these phenomena than anywhere else. The reasons for this (which time will not permit us to discuss) have their foundation, primarily, in the institutions of the country, which permit every one to indulge his wildest political and social ambitions. Add to this, opportunities for accumulating wealth unparalleled in the history of nations, together with the influence of railways, steam printing-presses, and telegraphs—which bring a whole nation into a common bond of sympathy—and we find every excitement, and every stimulus, for the intensest mental activity. For these reasons causes multiply and results develop with far greater rapidity in the New World than in the Old; but testimony is not wanting that the same thing, in kind, but more limited in extent, is now going on in Great Britain; and even heretofore stolid Germany is developing a like transition.

Decaying teeth and nervous diseases are correlated—each, in a measure, resulting from the other, and both symptoms of a common cause. Neurasthenia, or nervous exhaustion, is the almost uninterrupted condition of large numbers of the most highly cultivated and most charm-

ing people of modern society. I use the term, "nervous exhaustion," not in a positive, but in a relative, sense. Thousands, among the classes referred to, may not show the positive symptoms of nervous exhaustion; but they have, nevertheless, no reserve nervous force.

With watchfulness and attention to their health, and from long habit in a beaten track, they may be quite equal to a systematized daily routine, but any undue excitement, any excessive emotional strain, any unusual physical labor, becomes a drain upon a nervous system without a reserve force which breaks it down, carrying it beyond the point or possibility of immediate recuperation.

Every intellectual faculty developed by civilization, every emotional excitement of a finely strung nervous organization, contains within it the possibilities of the highest enjoyment, but when stimulated to excess or abnormally used, impairs with unerring certainty other bodily functions.

The teeth require as constant nutrition as the muscles, the bones, or any other organs or tissues of the system.

Teeth decay, primarily, because the nutrition of their organic structures being withdrawn, retrograde metamorphosis ensues; and, secondarily, because the agencies born of diverted, improper, or inadequate nutrition, are capable of producing their chemical solution.

Caries is simply solution or disorganization of tooth constituents by agents which are always external, but which would be quite inert under other constitutional conditions.

The vitality of well organized tooth-structure in a healthy body is quite sufficient to counteract the effects of any active external agents which might be temporarily present; but when nutrition is insufficient or diverted, the resisting power of its vitality inadequate, and destructive agents present, the teeth will yield at their weakest points, and caries result.

Herein we find the explanation of many cases which are seen of caries having made considerable progress and then ceased, the causes which produced it having evidently spent their force, or rather the conditions which permitted caries to advance having terminated.

Parents whose teeth are decaying because of diverted nutrition, and exhausted nervous force, transmit, by the

inevitable laws of inheritance, this condition to their offspring and it becomes in them constitutional.

Children born of parents whose physical health is barely equal to a continuance of their mental activities, enter the life-race handicapped.

That which was possibly but a temporary state in the parents, which might pass of itself, leaving no trace, or, at least, without serious effects upon the teeth, may become the fixed and permanent characteristic of the child, to be fought against and combated through life.

A child entering life under such unpromising and predisposing circumstances, will almost inevitably show frailty of physique, with poorly organized teeth and a certainty of their early decay.

Unless active and constant effort is made to arrest the result, the steps on the downward grade are as inevitable as mathematical law. Every mental or emotional excitement, every intellectual stimulus in early childhood, only aggravates the inherited and constitutional tendency, and the teeth succumb to destructive agencies which would otherwise be harmless.

The physiological law and its rationale are very simple. Excessive mental or emotional activity impairs digestion and diverts nutrition to the brain to repair undue waste; from lack of nutrition the teeth become degraded, and fall an easy prey to the aggressive agencies generated by the same disordered and defective assimilation.

The organic condition of the tooth, resulting from the want of proper nutrition, is thus the primary cause or essential element, either directly or originally, which gives potency to other causes which are superficial.

Given an unimpaired nervous system, in a sound body, without inherited taint, and teeth would never decay so long as that condition was maintained, and that, too, irrespective of climate, peculiar kinds of food, or any external agents which might be present in the natural course of nutrition. Even cleanliness, now considered so essential, would be unnecessary as a preservative of teeth, and need be practiced only for its comfort. We thus recognize the relation and the influence of the many secondary causes, which, by one or another, have been invested with such importance.

The radical remedy for these evils, and the salvation of the race from degeneracy and destruction, would seem to

involve a return to a habit of life more consistent with hygienic laws, but in the present irresistible march of civilization, a return to a primitive condition of life would be impossible; but a recognition of, and an adaptation to, a new condition of society is not only possible, but practicable.

A pessimistic view of the future is without reason, for while degeneracy of the teeth is certainly on the increase with certain families and classes, there are equally certain signs of its abatement. With increasing wealth in families comes less care, less anxiety, less nervous strain, more ease, more attention to hygiene, and better habits of life. Destruction of dental organs is arrested in childhood, and transmission of tendency is to a considerable extent stamped out.

The intellectual activity of to-day, the driving energy and intensity of modern thought, is not inconsistent with sound constitutions, with perfect health in all the tissues, and with long life. It is the worry which wears out the nervous system, and not the work.

Civilization, the glory of mankind in their maturity—which has rapidly and largely advanced at the expense of the best life-blood of the race, is, nevertheless, in no wise responsible for the incidental effects which have resulted from a violation of her true principles, for out of civilization ought to, and must, come the grandest examples of physical beauty the world has yet seen, without spot or blemish or taint of disease.

DISCUSSION.

Mr. Spence Bate, Plymouth: It was my intention to have read a paper on "The Tendency to Variation in the Ultimate Structure of the Dental Tissues," but I have been precluded from want of extended opportunity of obtaining specimens. I have already examined the teeth of man taken from ancient tumuli, but these have been mostly obtained from my own locality, and these I have compared with teeth of the Esquimaux, Flat-headed Indian, New Zealander, and Ashantee, and the examination has led me to the conviction, that both in *form* and *ultimate structure*, the teeth of the recent civilized man have undergone, and are still undergoing, a change. If those friends who may have the opportunity of obtaining speci-

mens of various races, both ancient and recent, will assist me, they will confer a favor and help me in the research.

Mr. Oakley Coles, London, pointed out that the teeth referred to by Mr. Spence Bate, as having remained undecayed for 2,000 years, although they had been the seat of decay during the life of the patient, would again take up the process of decay if they were inserted in an ivory denture and worn in the mouth, thus proving that decay was extrinsic rather than intrinsic in its origin, and depended for its development upon the conditions under which the teeth were placed.

Dr. Magitot, Paris: It appears to be the conclusion advocated by Dr. Kingsley, that dental caries is on a rapid increase. I am far from participating in the opinion, which could only be proved by means of statistics, which are wanting. In reviewing the history of caries in the past, one would infer that it was as frequent as it is to-day; in the time of the Egyptian civilization I have found the same indications; and going still farther back, we arrive at prehistoric times, where, as is well known, many of the crania present evidence of caries. To explain the frequency or the scarceness of caries in particular parts of the earth, the influence of race must be considered; for it is certain that at the present time many diseases attack certain races more speedily than others, and dental caries is amongst the number. I endeavored some time since (in a table published in a treatise upon dental caries) to show what has been the part played by race in the distribution of dental caries in my own country.

Dr. George M. Beard, New York, said that he was present by invitation of Dr. Kingsley, that he was not a dentist, but had given much time to the study of the effect of civilization on the nerves, and had treated of it especially in his works on "Neurasthenia and American Nervousness." Dr. Kingsley was sound and verifiable throughout, and he was glad to have heard his paper. It was carrying philosophy into dentistry. (1.) Nervousness was mostly a modern condition. (2.) It was most marked in America for two reasons: (*a*) Greater intensity of life; (*b*) Dryness of air and extremes of temperature. (3.) All the special organs of the body have been reasoned upon in the same way as the teeth, that is, by giving excessive prominence to local and secondary cause. Hay fever, for example, was formerly considered to be local and parasitic, it is

now proved to be a constitutional, a functional nervous disease. Nervous dyspepsia also, was once supposed to be purely local, it is now known to be constitutional, and to be treated constitutionally; just as dentists attributed decay of teeth to "sweets," etc., just so physicians attributed nervous dyspepsia to "rapid eating," "ice water," etc. Savages and semi-savages can eat anything in enormous quantities, or go without eating, and they do not have dyspepsia or bad teeth, or rarely; also, they can bear bad air and almost all other evil influences, and be unharmed; their descendants also are unharmed. Alcohol and tobacco do not hurt savages. The temperance agitation is made necessary by civilization. The tendency of evil is to cure itself, within certain limits; and Dr. Beard agreed with Dr. Kingsley, that there would be in the future some improvements.

Lecture on Typhoid Fever.

(Reported for THE MEDICAL NEWS.)

THIS disease is exceedingly prevalent in all parts of this country; and, in fact, we believe, all over the world. In the *Practices of Medicine*, published in this country and in all the countries of Europe, it is regarded as a most important affection—important as regards its great prevalence among all classes, high and low, rich and poor; its general infectiousness, by which it is easily communicated from one person to another, under certain conditions, modifying prevailing diseases, changing their type; and the great danger attending its attacks. In this country and England, besides being known by the name of typhoid fever, it is sometimes called enteric fever, gastric fever, intestinal fever, pythogenic fever, slow nervous fever, autumnal or fall fever, etc. Some of the French names besides *fièvre typhoïde* are *enterite septicémique*, *dothië-nenterite*, *enterite folliculeuse*, etc. The appellation pythogenic, we understand, was introduced by Dr. Murchison to imply the putrid source of the disease, and, although the term is frequently employed in speaking of it, yet it is no more applicable to this affection than it is to numbers of others, which have their origin in putridity just as much as it does.

Typhoid fever is noted generally for the insidiousness

of its onset. In nearly every Practice of Medicine that may be taken up, on referring to a description of the symptoms at the commencement, about the following language will be found: "The decline of the patient's health has been so slowly progressive and uniform, that he is unable to state precisely when his illness commenced." For days, and sometimes for two or three weeks, the appetite has been diminished, and, along with its decrease, there has been a disinclination for bodily or mental exercise. He has complained of slight headaches, chilly sensations, especially chilly feelings along the spine of the back; also a sense of weariness and of pains in the lower limbs. The legs have felt heavy, as if a load was attached to them, and it has seemed to require special exertion to move them. The patient recollects, that, on walking for a long time before he was taken down, there was a disposition to sit down and rest on going but a short distance and that recuperation followed very slowly. At night he is troubled with wakefulness, although during the day he was often stupid and sleepy.

But before describing the symptoms of the disease, we will consider briefly how it originates, its method of propagation, and some other features respecting it. We will state, however, that very much in regard to the disease remains unsettled, and probably will for a long time. But a great deal has been developed, and our knowledge is very much increasing.

It is now generally believed by many that typhoid fever, like small-pox, measles, scarlet fever, etc., originates in a specific poison, which produces it and no other disease. This may consist in peculiar microscopical fungi or animalculi of some kind, or it may be something of an entirely different nature; but whatever the poison may be, if it be a specific poison that originates the disease, it is necessary for it to be present to constitute the disease. Therefore, if a person, at any time, is subjected to exhalations of any kind, however putrid they may be, unless this poison is present, typhoid fever will not result. It has sometimes happened that when individuals have been subjected to putrescent exhalations the fever has resulted. Yet it does not appear from observations, that those men whose occupations require them to spend much of their time in an atmosphere contaminated by emanations from decomposing animal and vegetable matter, are any more liable to

it than those employed in other work. It is stated that Dr. Guy compared the past and present condition of ninety-six nightmen, with about the same number of bricklayers, laborers, and brickmakers, and, after a most critical investigation, he says: "An examination of the tabulated results of his inquiries must convince the most skeptical that the health of scavengers is fully equal to that of the laboring man with whom they are compared." M. Parent du Chatelet made observations with reference to the health of men who work in sewers, and his conclusions are the same. Now, in these instances in which we find individuals, not for a short time, but for a long period, exposed, day after day, to the breathing of very foul air, loaded with the putrescent emanations of decaying animal and vegetable material of every kind, there is no development of the peculiar poison by the action of which upon the system typhoid fever is produced. Or, if, at any time, it was generated, the parties exposed to it were enabled to resist it by some peculiarity of constitution, like the poison of small-pox is now and then resisted by an individual who happens to be exposed to it. But at other times, under the same circumstances, the disease is produced. For instance, the accumulated or pent-up sewage of a town escapes into the subjacent soil within and about it, soaking into the wells and defiling the drinking water, and giving off filthy emanations into the air, and an outbreak of typhoid fever follows. Occurring immediately after such a circumstance, it is difficult not to ascribe the disease to it. But if it is true that the disease is caused by a specific poison, we would have to believe that the overflow of sewage had brought about the formation of this poisonous agent, which had poisoned all coming in contact with it, and not that the deleterious influence was due to the contamination of the atmosphere and the drinking water *per se*.

If it be, therefore, a fact that typhoid fever has its source in a specific poison, putrid exhalations alone can not cause it. For it to follow upon them, it is essential that they contain this poison, which evidently they do not always, though not unfrequently. There can be no doubt, however, that in case of such a poison they constitute a favorite nidus for it, and furnish an excellent soil for its further development.

Many writers consider that the specific poison that

originates typhoid is chiefly contained in the *feces*, and that by their agency it is propagated, *water* affording the great channel by which it is conveyed. The atmosphere, however, says Dr. Roberts, may become impregnated with emanations from the excreta, either because the latter is thrown into some open space, or because the water-closets, privies, sewers, etc., are imperfect, and they may thus find their way into the system; but, by means of water, materials containing the poison may soak through the soil from cesspits, or, from being merely thrown upon the ground, they may obtain access into wells, the water of which is used for drinking purposes; or they may find their way into cisterns through the waste pipes. Milk is thought by some to be a means for conveying the poison, either by water containing it being mixed with the milk, or from the milk becoming tainted in some other way by the excreta of patients suffering from typhoid fever.

While the distinguished German author, Niemeyer, does not teach that the *feces* are the chief agents containing the poison, and the principal means for propagating it, yet he states that the *contagion*, as he terms it, "clings particularly to the dejections of patients, and that persons exposed to the emanations from stools of typhoid patients are most apt to be infected." And he says he considers it doubtful if the *contagion* be transferred by the exhalations from the skin and lungs. The infection of the nurses and physicians, therefore, he says, is rarely seen, and, when it occurs, it is always questionable whether it be due to the emanations from the patient, or from his dejections. "At all events, using the bed-pans, night-stools, and privies, where the dejections of patients have been emptied, appears more dangerous than being brought into contact with the patient himself." Still, Niemeyer believes that the disease is propagated by *miasm* as well as by *contagion*, for the reason that cases occur in places remote of travel, where no cases have existed for years, and where there is not the slightest suspicion of a contagious origin.

Now that Koch, of Germany, has discovered by the microscope a tubercular *bacillus*, demonstrating that tubercular diseases have their origin in a microscopic living organism, we should not be surprised at any time if some enterprising microscopist should demonstrate, beyond quibbling, that typhoid fever has its cause in some

sort of germs or animalculi. In fact, even now, Dr. Roberts is of the opinion that certain organisms discovered by Dr. Klein, may have a relation to the intestinal lesions peculiar to typhoid in the way of causing them. He describes the organisms as of the nature of fungi—being minute roundish bodies of a greenish-brown color which undergo division; and micrococci, the latter being produced by the subdivision of the former.

In a medical journal, of August, 1882, we find the following quoted from a recent German medical journal:

“Meyer examined 22 cases of typhoid patients and found in 18 of these a large number of bacilli similar to those described by Klebs and Eberth, in the enlarged plaques and in the lymphatic channels of the intestinal canal. In three cases of scarlatina and one of measles examined pathologically, similar bacilli could not be found. Thread-like bodies such as mentioned by Klebs as a special step of development of the typhoid bacillus were found only in necrosed tissue.

“Meyer comes to the conclusion that this typhoid bacillus is a special element of typhoid fever, and recommends large doses of benzoate of soda as an antiseptic remedy.

“Friedlander recommends that preparations be colored fuchsin, or Bismark brown, at a high temperature, in order to obtain the characteristic vacuoles in the bacilli.”

There is quite a variety in the cases of typhoid fever, both as regards the general severity of the affection, and the prominence presented by various symptoms. Dr. Murchison, who is very high authority as regards fevers, gives the following varieties:

1. The *mild form*, under which would be included the *abortive* variety of certain writers, which ends in the second or beginning of the third week, as well as some cases considered to be of the nature of febricula.

2. The *grave form*, which according to the prominent symptoms present is subdivided into—inflammatory, atoxic, adynamic, irritative, abdominal, thoracic, and hemorrhagic. These various varieties our readers will notice further on as we describe the disease.

3. The *insidious* or *latent form*, also called *ambulatory*, because the patient often walks about during the whole attack. Sudden death may occur in such cases from perforation of the intestines or from hemorrhage.

Besides these forms, it is very probable that the affections called *infantile remittent fever* and *gastric* or *bilious fever*, are but modified forms of typhoid fever.

Autopsies or *post-mortem examinations* of persons who have died from disease are always exceedingly interesting. By them we learn what organs were diseased, the extent of the disease, the nature of it, etc.; and we are also enabled to ascertain the causes of symptoms, and to study the relationship existing between them and the pathological conditions, and what circumstances may modify certain symptoms. Repeated autopsies of individuals dying of a certain disease afford us the means of ascertaining what pathological conditions are always present in it, and what are merely incidental. We have thought, therefore, that right here, before commencing to consider the pathology of typhoid fever—the morbid conditions upon which the disease is dependent—we would copy an account of an *autopsy* of a case of typhoid fever, from a standard work on the *Practice of Medicine*. The patient had died on the *twenty-third* day of his illness. In cases of recovery, and in many, too, that prove fatal, the disease is usually more protracted.

Body somewhat emaciated. Lungs weighed fourteen ounces, floated in water, contained a dirty brown fluid. Heart healthy, contained a colorless clot in the right ventricle. Abdomen displayed the effects of general peritonitis, the lower part of the cavity contained about a quart of turbid serum, and the coils of the small intestine were adherent to each other, and to the lower part of the abdominal wall, by layers of solid lymph. Liver weighed three pounds and a quarter, soft, friable, and fatty. Bile moderate in quantity, of light ochre color, watery, and very acid, instantly turning blue litmus paper bright red. Spleen weighed ten ounces, of natural color and consistence, but flabby. Intestines distended; on separating the purple adherent coils of the ileum, a perforation a fourth of an inch in diameter was discovered six inches from the cecum; the opening in the intestinal wall was plugged with the solid lymph that adhered to the contiguous coils of the bowel, so that there was no escape of fecal matter into the peritoneal cavity. Stomach, duodenum and jejunum healthy. Intestines contained some smooth, soft-formed feces, varying in color from light ochre to dirty white. Mucous membrane of the ileum uni-

formly red and inflamed, covered over with tenacious firmly adherent mucus of a bright ochre color. The solitary and agminated glands of the upper portion of the ileum quite healthy; lower down they were vascular and swollen; two feet from the cecum the first signs of ulceration, and in this last portion of the ileum the solitary glands were swollen to the size of a pea, and presented ragged excavated centres. The last twelve inches contained several Peyer's glands in a ragged state of ulceration, the ulcers having raised, firm, very vascular and angry looking edges, and irregular depressed surfaces, formed apparently of yellow sloughs, adhering to a raw, almost bleeding surface beneath. These sloughs could be readily separated with the finger nail. Their lower surface had a yellowish color; they were friable, and some parts had an almost cartilaginous consistence and paler color. After washing and careful examination these sloughs were found to be composed of solid lymph. The more advanced ulcers were seated in the inflamed and thickened muscular layer. The perforation corresponded to the centre of one of the large ulcers. The cecum, colon, and rectum were healthy throughout. The mesenteric glands greatly congested and swollen. Pancreas somewhat hard, but apparently healthy.

(To be continued.)

SELECTIONS.

A Year's Progress in Gynecology.

At a recent meeting of the London Obstetrical Society (*Am. J. Obstet., Supplement*, May, 1882), Dr. Galabin showed microscopic sections of the everted mucous membrane in laceration of the cervix. The sections leave no doubt that the surface looking toward the vagina is really the everted cervical mucous membrane. In one case, which was recent, the cervical villi were hypertrophied, but there was no marked inflammatory change, and the cylindrical epithelium was almost intact. In an old case the cylindrical epithelium was almost entirely lost, but there were patches of ill-formed squamous epithelium between the gland orifices. The surface was densely infil-

trated with inflammatory cells, and the glands beneath dilated and proliferating.

In the *Am. Jour. Obstet.*, July, 1882, Prof. Schröder, of Berlin, proposes a modification of Emmett's operation for lacerated cervix, which is designed to cure the catarrh of the cervix at the same time that it removes the laceration. The operation is a very ingenious one, and is said by the author to be easy to perform. It would take too much space to give a description of the operation here, for which we refer to the publication above.

Lawson Tait has removed the uterine appendages thirty-five times for chronic inflammation of the ovary, with only one death. He considers the operation as justifiable as the enucleation of an eyeball and not any more dangerous. (*Am. Jour. Obstet.*, July, 1882).

Total extirpation of the uterus for malignant disease has now been performed a sufficient number of times to permit a judgment upon the merits of the operation. Freund's operation—the abdominal method—has been done altogether about a hundred times, not for cancer alone, however, with a mortality of about seventy-five per cent. Extirpation of the uterus through the vagina—Schröder's operation variously modified—gives a much more favorable result. It has been performed about sixty times, with a mortality of perhaps a little over twenty-five per cent. As in all other grave operations, so here also, the experience of the operator makes the greatest difference in the results. Thus Schröder, out of seven operations, lost but one case; Olshausen had six successful consecutive cases; Martin, twelve cases with three deaths, and Billroth seven cases with three deaths. A comparison of these figures, moreover, shows that probably a judicious selection of cases has an important influence upon the result. Freund's operation, it would seem, must hereafter be restricted to those cases in which extreme narrowness of the vagina or pelvic outlet prevents resort to the vaginal method.

Ruge and Veit (*Ztschr. f. Geb. u. Gyn.*, vi. 2—*Am. J. Obstet.*, *Supplement*, May, 1882) have studied cancer of the body of the uterus, their material comprising twenty-one cases of their own and twenty-two from the literature. They find that primary cancer of the corpus uteri is a rare disease, and always develops from the mucous membrane. It occurs under two clinical forms, diffused and circum-

scribed; the former appearing to be the most frequent. With the growth of the neoplasm the uterus enlarges, the walls becoming hypertrophied. The demarkation between the morbid and healthy structures is always well marked. The surface of the diffuse form is warty or villous; that of the circumscribed, smooth. It seems possible that a myoma (fibroid) may undergo cancerous degeneration. [This is not generally accepted by pathologists, R.] The retroperitoneal, lumbar and other glands, may become affected early, and the morbid process may involve the internal os. Bladder and rectum may become implicated. Etiology obscure: cases in virgins and nulliparæ are relatively frequent, so that pregnancy or coitus can not well be accused as causes. Two-thirds of the cases occurred after the fiftieth year. The most prominent symptoms are the hemorrhage, periodic pains which are only uterine contractions; fetor not essentially present. Cachexia occurs late. Duration generally over two years.

Treatment, Freund's (abdominal) or Schröder's (vaginal) extirpation of the entire uterus. If extensive involvement of surrounding organs renders this impossible, scraping, followed by iodine, bromine, iodotorm, Monsel's solution, or carbolic acid [nitric acid, R.] may be employed as a palliative.

Dr. I. E. Taylor [*Trans. Am. Gyn. Soc.*, 1881, p. 199] describes lupus of the vulvo-anal region, of which somewhat rare affection he has seen seven cases. It is probable that many cases have been unrecognized owing to the fact that most ulcerative or hypertrophic affections of the genital or perineal regions are considered to be syphilitic. There is nothing peculiar in lupus of the vulvo-anal region; it will not be mistaken for syphilis or epithelioma, if the clinical characteristics of these diseases are remembered. Dr. Taylor's views of the pathology of lupus seem to be somewhat obscure, although he recognizes, with most prominent modern dermatologists, the essential local nature of the affection, and its non-dependence upon syphilis or "scrofula." The treatment consists in cauterization with nitric acid or acid nitrate of mercury. Scraping may precede the caustic. Constitutional remedies are not of much use, although Dr. Taylor has some confidence in small doses—1-25 to 1-30 gr. of bi-

chloride of mercury or Donovan's solution—five to eight drops three times a day.

Dr. Horatio R. Bigelow, of Washington, finds from an examination of the statistics of American ovariologists, that the total number of cases operated in this country of which he could get particulars, amount to 1,011. Of these, 766 recovered and 245 died; a fraction over seventy-five per cent. of recoveries. The clamp and ligature were used in nearly an equal number of cases. Listerism is still extensively used, but is dying out. As an attempt to solve certain problems connected with ovariectomy, the author's work deserves great credit. (*Am. Jour. Obstet.*, July, 1882.)

Dr. S. J. Radcliffe (*Phil. Med. Times*, June 3, 1882) reports a case of fibroid tumor of the uterus, which disappeared under the use of iodine locally and internally. There is nothing new in this treatment, but it has not had much success in other hands. In the early stages it might promote resorption of the hyperplastic muscular tissue, and hence a trial of it would be proper. Dr. Radcliffe applies Churchill's tincture locally, and gives the compound tincture (U. S. P.) internally, in the dose of ten to fifteen drops three times a day, largely diluted. He also uses large vaginal injections of hot water, to which perhaps some of the effect of the treatment is to be ascribed.

Tuberculosis of the Fallopian Tubes is the subject of an essay by Dr. Schramm, of Dresden (*Archiv. f. Gynæk.* XIX., 3). The author has found that *one per cent.* of all the women who died in the City Hospital of Dresden during the last twenty years had tuberculosis of the Fallopian tubes. In women with tuberculosis of the lungs or other organs, 4.2 per cent. had also tuberculosis of the Fallopian tubes. Three-fourths of the cases occur before the thirtieth year. Primary tuberculosis of the tubes is rare; the cheesy form is the most frequent. In the majority of cases the tubercular degeneration begins in the ampulla of the tube.

In the treatment of hysteria, Dr. Goodell gives the following advice:

When called to treat a young girl with a hysterical attack, there are three things which you had better do: (1.) Institute at once firm pressure in the neighborhood of both ovaries. This is very apt to quiet the patient at once. (2.) Administer an emetic. I have found that a

woman who is well under the action of an emetic has not the opportunity to do anything else than be thoroughly nauseated. Give a full dose of ipecac with one grain of tartar emetic. (3.) And this method of controlling the spasm will often act charmingly: take a good-sized lump of ice and press it right down on the nape of the neck. This produces quiet by its powerful impression upon the whole nervous system.

Tinct. of Perchloride of Iron in Post-Partum Hemorrhage.

BY J. H. SCARFF, M. D., BALTIMORE.

(Cases related at the Medical and Surgical Society.)

It is not my purpose to enter into a discussion of the general treatment of post-partum hemorrhage, nor do I wish to be understood as placing this agent among the first to be used to combat these hemorrhages, but as a *dernier ressort* when all others have failed, and your patient seems to have but one more step to realize the mysteries of the hereafter. Many of you, no doubt, have read the many able articles of European writers upon this subject of late, and probably have had more experience in its application, but having had two cases in the past four months of alarming hemorrhage following labor, and as I confidently believe my patients owe their prolonged sojourn in this land of sin and sorrow to the injection of perchloride of iron into the cavities of the uteri, I do not hesitate to relate the two following cases in which I have used this remedy:

I wish it to be distinctly understood, I claim no originality to either the agent used or the *modus operandi* in using it. It originated with that eminent obstetrician, Barnes of London, and several cases so treated by him were published in the *British Medical Journal* of 1876 or '77. Following the report of his cases, there came other testimonials to the virtue of this agent, from Playfair, Chambers, Steele and others. As I have before stated, this potent agent should not be used indiscriminately in all cases, but only after such remedies as ergot, external pressure, cold, kneading of the uterus and galvanism have failed.

CASE 1.—Mrs. M——, wife of a druggist (which was a

most fortunate circumstance for her), was taken in her third labor on the afternoon of February 11. I had previously ascertained from her husband that her first two labors were followed by most alarming hemorrhages, but through the skill of the lamented Dr. Knight, she was saved. Nothing worthy of mention occurred during the first stage of labor excepting a prolonged interval of quiescence between the pains. This stage lasted about $4\frac{1}{2}$ hours. After delivery I immediately cut the cord, as it had ceased to pulsate. Turning my attention to the woman, I found the uterus as large as before the birth of the child, with a soft and doughy feeling. Introducing my hand into the vagina I found the placenta was detached and blocking up the os uteri; it was at once removed, and with it there came a most appalling hemorrhage, and in a very short space of time the woman was completely blanched, pulse almost imperceptible, sighing respiration and other symptoms indicating an almost complete collapse. I hurried her husband down into the store for a bottle of tincture of perchloride of iron. I diluted it one-half with water, and with the aid of a Davidson's syringe which I had procured, this was injected into the cavity of the uterus. (I would state I first, as well as I could, emptied the uterus of all clots.) The effect was magical. Almost directly after the injection, the uterus began to firmly contract, gradually forcing out my hand with large masses of clotted blood, coagulated by the iron. I watched the patient for two hours, a half hour of the time firmly holding the uterus with my hand, and little or no hemorrhage occurred after the injection. She was relieved from the condition of collapse by brandy and hypodermic injections of atropia, and made a rapid recovery without any bad symptoms. In this case, excepting at hemorrhage, I gave her from the time the os was sufficiently dilated to admit of the passage of the child's head, until the head was delivered, two hypodermic injections of ergot, 5 j each, without avail. I had no time to try other expedients, but resorted at once to the iron.

CASE 2.—Mrs. K——, aet. 26, rather nervous temperament, sent for me on the morning of March 18, to attend her in her second confinement. Having attended her in the first labor, which was followed by hemorrhage that could only be controlled by a strong current of galvan-

ism, I concluded I would be prepared to meet any emergency with the perchloride of iron. While the first stage of labor was progressing, I sent to the druggist for ʒ vi of the tincture perchloride, and added one-half of this to oj. of water. A Davidson syringe was made ready for use, and I then waited the dreaded hour. The labor became tardy and protracted, and she was delivered, after a long traction with the forceps, of a large male child. Ergot was given hypodermically twice, and kneading constantly kept up by the nurse during delivery. Hemorrhage at once set in and I attempted to control it by the introduction of ice into the uterus, and grasping it with one hand on the abdomen, the other in the vagina. It was of no avail; the hemorrhage increased. I next tried the plan of irritating the interior of the uterus with the finger-nails, but in doing this I completely detached the placenta, which was removed, followed by a hemorrhage, which soon put my patient into a state of collapse. I at once began the injection of the solut. of ferri perchlor. into the cavity of the uterus, with the effect of immediately producing firm contraction and cessation of hemorrhage. She finally recovered after a mild attack of metritis, and to-day both she and child are doing well.

These constitute my experience in the use of this agent, but can any one doubt that the lives of these two women were saved by it? That there may be danger in its use I do not deny. While the uterus is in this relaxed condition, the mouths of the veins open, it may pass into them, causing clotting of blood, thereby producing thrombosis, but notwithstanding this, I presume, from my own experience, as well as from the experience of the many able writers on this subject, that this mode of treatment in puerperal hemorrhage is not only justifiable, but under many circumstances strongly indicated.

Bacilli as Etiological Factors in Disease.

IF there has been any one feature more prominent than another in medicine during the past two or three years more particularly, that feature has been the inquiry into the causation of disease. This inquiry may be said to be characterized by a species of materialism, that is, the

search has been for demonstrable germs, which, being taken into the system, give rise to the particular diseases, or, in other words, the tendency has been to regard disease as the fruitage of certain seeds, sown in the soil of the system. This conception is, we say, somewhat materialistic as opposed to the somewhat vague hypotheses of telluric and other intangible influences, which have for many years dominated the professional mind.¹

Our readers are doubtless familiar with the experiments which Pasteur, Koch, Klebs, Tommasi-Crudeli, Sternberg, Wood and Formad have reported within the past year. The activity of investigation in this direction is clearly manifested by this array of names, and the expectant medical mind looks longingly towards the east for the appearance of the day-star of hope for deliverance from the uncertainty which has, ever since medicine started on its history, so perplexed the searcher into the causes of diseases. As yet, however, although hope has been buoyant and full of lively anticipation, it has not had much that it can plant its foot upon, as upon a solid foundation. Pasteur, it is true, has discovered the *fons et origo malis* of the splenic fever and cholera which have been wont to decimate the herds and chicken coops of France, but although his discoveries have raised us up to where we can well-nigh isolate the bacillus which works death in the form of diphtheria and scarlatina, we have not yet been quite able to do so. When this greatest among modern savants discovered the germ of these diseases which deal death to these lower animals, and by cultivating them, robbed them sufficiently of their virulence to permit of their inoculation into the well beast, which it thoroughly protected against the spontaneous and fatal form of the disease, the heart of humanity gave an exultant throb. Was it too much to hope from these experiments, that the germs of diphtheria and scarlatina might soon be detected and isolated, and that they too by cultivation might be sufficiently mitigated in their virulence to permit of their injection in the prophylaxis of two of the most fatal diseases of the nursery, after the same manner that we now prevent small-pox? A year has, however, passed without a realization of the hope. Will it ever be realized?

Koch has detected, or at least has flattered himself that he has detected, the bacillus which, on infesting the

system, causes consumption, the most fatal of the diseases to which human flesh is heir. This discovery has, however, not borne any fruit in practical results in either man or animal; and granting that he has not deceived himself, as some observers claim that he has, it is somewhat difficult to see wherein any such result is to accrue.

Tommasi-Crudeli in Europe, and Sternberg, under the direction of the National Board of Health in this country, have been investigating the bacillus malarisæ, with, however, no harmony of result, the former claiming to have found the bacillus, and the latter either denying or doubting its existence. Any hope that these experiments might settle forever the vexed question of the material nature of the cause of fever and ague, has not yet been justified, and although the investigations and speculations of these gentlemen are interesting from a scientific point of view, their fruit in practical results is as yet problematical.

The investigations and experiments of Drs. Wood and Formad, into the origin and causation of diphtheria, have been extremely interesting. Their only practical result thus far has been in the direction of establishing the fact of the local origin of the disease, that is, that it originates on the mucous membrane of the throat and afterwards becomes systemic, instead of *vice versa* as many have held. These experiments have moreover been decidedly in support of the view of the unity, as opposed to the duality, of diphtheria and croup.

In the midst of the activity above indicated, and in spite of the fact that the practical outcome is as yet little or nothing, it will be seen that when such outcome is developed, if haply it ever is, it will not surprise us or find us unprepared to avail ourselves of the immense possibilities which they have in store.

On Nerve-Stretching.*

BY W. J. CHANDLER, M. D., SOUTH ORANGE, N. J.

PART I.

THE subject of nerve-stretching has recently attracted considerable attention in the medical world. It is not,

* Read before the New Jersey State Medical Society, May 24, 1882.

however, a procedure of recent origin. Three hundred years ago, William Fabricius made forcible extension of the limbs for rheumatism and painful affections of the joints. But while this practice has never been lost sight of, its mode of action has been very imperfectly understood. Experiments in nerve-stretching were made by Harless and Haber in 1858; by Valentine in 1864; by Schleich in 1871; by Conrad in 1877; and more recently our knowledge of this subject has been very greatly increased by the labors of Neuman, Legaard, Vogt, Tarchanoff, Quinquand, Wiet, Brown-Sequard, and others (*Le Prog. Med.*).

Operative surgery may be said to have begun its labors in this direction when Billroth cut down upon the sciatic nerve expecting to find a neuroma. After a careful search, during which the nerve was lifted from its bed and more or less traction made upon it by the handling it received, no tumor was found. The wound was closed, somewhat to the chagrin of the operator. The patient, however, was relieved of his pain from the date of the operation. Here, then, was a successful case of nerve-stretching unwittingly done. Nearly three years later (February 15, 1872), Von Nussbaum, of Munich, performed the really first operation of nerve-stretching with a definite purpose. The case was one of spasmodic painful contraction of pectorals and flexors of the left arm and hand, caused by a bullet-wound in the neck and elbow. There was anæsthesia extending over the arm and the left side of the neck and face. During several years various modes of treatment (anodynes, stimulants, electricity, etc.), had been tried in vain. It was then that the illustrious surgeon determined to *cut down upon* and to stretch the nerves of the brachial plexus for the relief of the symptoms. The result was in every way satisfactory. The spasms were allayed, pain ceased, and sensation returned. It was about this time that Billroth appreciated the full significance of the results in his case, and published the details. These two operations opened a new field in surgery, into which surgeons looked with wonder, but were not apparently eager to enter. Paul Vogt, who published a small volume on this subject five years later (1877), was able to collect but fifteen cases.

Dr. J. H. Pooley (Columbus, O.), in August, 1880, published an article in the *Medical Record* (New York), with

a summary of 67 cases, including those of Vogt's, and 30 cases of anæsthetic leprosy.

Fenger and Lee (*Journal Nervous and Mental Diseases*, New York, April, 1881) followed in April, 1881, with an admirably classified article and a brief account of 94 cases. One of the latest and most comprehensive articles on this subject, and one from which we shall frequently quote, appeared in the February and March numbers of the *Revue de Chirurgie*, Paris, 1882. These articles give a general review of the whole subject, and contain a tabulated list of 132 cases.

Professor Nocht, of Berlin, has collected 150 cases in which this operation has been performed, but I have been able to secure only a brief abstract of his paper (*St. Louis Clin. Rec.*, February, 1882).

The ground has been very thoroughly canvassed, and following these able writers, operators and experimenters at so short an interval, I shall not be able to present much that is new; nevertheless, availing myself of their labors, and through the kindness of many friends in the profession, I am able to present to your consideration a much larger number of cases than has yet been embraced in any single paper on this subject, and the conclusions drawn therefrom, by indicating the proper sphere and therapeutic value of the operation, may, I trust, be not unworthy of your attention.

ANATOMICAL LESIONS AND PHYSIOLOGICAL EXPERIMENTS.

In order that we may proceed intelligently, it is necessary to consider the changes that take place in the nerve and adjacent tissues when traction is made, *i. e.*, the *anatomical lesions*; and then to study the effects of these lesions in the dead and living animal—anatomical and physiological experiments. We gather most of these facts from Vogt, Quinquand, and Brown-Sequard, and are largely indebted to the excellent abstract made by Artaud and Gilson (*Rev. de Chirurgie*).

When the nerve of a living animal is stretched there are certain changes wrought in the nerve-tubes, their sheath, and the capillary vessels. If the sciatic be examined one month after stretching, we (Latteux) find embryonic cells under the sheath, atrophy of the superficial fascicles, while the deeper fascicles are sound. According to Quinquand the central fibres are intact; beside

these are seen degenerated fibres, in which the myelin is clearly segmented. This degeneration commences at the point where traction was made, and extends along the tubes as far as the spinal ganglia, thus showing that stretching has a central action. It also, but not to so great a degree, extends along the peripheral extremity of the nerve. According to Sheving, this partial integrity explains the persistence of motility. Finally, beside these healthy and degenerated fibres, the microscope shows other fibres in the process of repair.

But these are not the only changes. The sheath and its vessels present equally important lesions. At the point of traction are numerous extravasations of blood. Above and below are also found extravasations in the sheath. These extravasations are always found in the same situation—the sciatic notch and the popliteal space; they are also found along the gluteal and peroneal vessels, *i. e.*, wherever the vessels for the nerves penetrate the sheath. These points have already been observed by Klum as being the favorite seat of disseminated neuritis.

These extravasations entirely disappear after five or six weeks. The fact that there are extravasations is shown (Vogt) by killing the animal with chloroform and injecting the abdominal aorta with the blue fluid of Thiersch. Portions of the sciatic nerve are then removed and hardened in alcohol and chromic acid. The microscope then shows dilatation of the vessels and numerous points of rupture. At these points the blue matter of the injection has entered the cellular tissue. This is always the case even when the operation has not given rise to any hemorrhage.

In some cases the sheath is sclerosed and thickened, and in all cases its adherence to the nerve is lessened.

Disturbances of nutrition take place *occasionally*, in the parts supplied by the nerve. The muscles may atrophy and the extremities (toes) slough off.

The important lesions then of nerve-stretching are, first, a loosening of the sheath of the nerve; second, extravasation of blood into the cellular tissue of the sheath; third, rupture of a portion of the nerve-fibres; fourth, dilatation of the vessels; fifth, nutritive changes.

ANATOMICAL EXPERIMENTS.

If we expose a nerve in the cadaver and to its free ex-

tremity attach a weight, we notice that while it has but little elasticity it is very *extensile*. By following Vogt we can show that this elongation not only takes place at the point where the nerve is exposed, but is distributed throughout its *whole length*. This distensibility diminishes from the center to the periphery, and is proportioned to the normal movements of different parts of the body. By increasing the weights we shall finally reach the limit of distensibility and rupture the nerve. The point of rupture is variable, sometimes being near the attachment of the weight and again in a distant part of the nerve. Trombetta has ascertained the minimum weight, or force, necessary to rupture the different nerves in an adult man:

To rupture the sciatic requires 84 kilos.

"	"	"	popliteal	"	52	"
"	"	"	crural	"	38	"
"	"	"	median	"	38	"
"	"	"	ulnar	"	27	"
"	"	"	radial	"	27	"

The force needed for therapeutic effects is not over one-half that required to rupture. A less amount of force is necessary in children than in adults, in women than in men, and in the feeble than in the robust.

PHYSIOLOGICAL EXPERIMENTS.

The results of Tutschek's experiments show:

First.—A single slight extension of the sciatic nerve increases reflex irritability in the corresponding limb.

Second.—A second extension immediately after the first diminishes that irritability.

Third.—A third reduces it below normal, but reflexes can still be produced.

Fourth.—A powerful stretching completely annuls all irritability.

The amount of force used likewise affects the *permanence* of the results. If the traction be slight, there result immediately anæsthesia, momentary spasms, and slight loss of motion. These effects all disappear within a few hours. If, however, the nerve is forcibly stretched, the paresis is greater, the anæsthesia more permanent, and the reflexes may temporarily disappear.

The *direction* in which traction is made is of importance. If the nerve be drawn in a direction *away from the spinal*

cord there results anæsthesia with slight paresis. If the direction of traction be *toward the cord*, there results an equal amount of anæsthesia, but a greater paresis, together with a loss of reflexes. This is an important practical point, explaining why nerve-stretching is ineffectual in certain cases, and indicating a means for making it more effectual in others.

In neuritis (Vógt) stretching arrests the inflammation. This is shown by exciting a neuritis in a dog by an irritating injection into the nerve. Stretching is then done and the neuritis is checked. Some cases of optic neuritis (Wecker) seem to have been temporarily arrested in this way.

If the right sciatic of a guinea-pig be stretched there follows anæsthesia, not only of the parts supplied by the right sciatic, but also of those supplied by the left sciatic, and frequently of those supplied by the right and left crural; but while the anæsthesia in the right limb is persistent, that induced in the distant parts is transient. Again, if the right sciatic of a guinea-pig be stretched the usual anæsthesia of the right limb follows. Soon after the left sciatic of the same animal is stretched, and then follows not only anæsthesia of the left limb, but a *return of sensibility to the right limb*. This phenomenon (called by Quinquand "transfer of sensibility by irritation") proves that stretching has not only a peripheral, but also a central action.

One more experiment—that of Brown-Sequard, who makes in a guinea-pig a right lateral hemisection of the dorsal spinal cord. There immediately result a great hyperæsthesia and considerable loss of power in the right hind limb, while a very decided anæsthesia is produced in the corresponding limb of the other side. If now the left sciatic nerve be stretched, there follows in the left limb loss of power and a *return of sensibility*, while in the right limb the condition of hyperæsthesia is markedly increased. This hyperæsthesia is not confined to the region supplied by the sciatic, but extends to the region of the crurals, or even to the anterior extremities. It is always accompanied by a noticeable amount of motor paralysis. (Similar results were obtained by hemisections in the cervical regions.)

These experiments prove conclusively that stretching the sciatic nerve produces some *change* in the *nervous*

center with which it is connected, and *transmits* its effects through the *whole length of the spinal cord*, producing in the different parts of the body supplied therefrom certain more or less persistent *modifications of function*.

To sum up our knowledge from experiments, we conclude:

First.—The nerves are extensible, and can be elongated within certain limits without danger of rupture.

Second.—That stretching acts especially to interrupt the sensitive current, while it allows the motor current to pass.

Third.—That the motor current and reflexes are more affected by centripetal than by centrifugal traction.

Fourth.—That stretching acts on the nerve-centers, producing certain dynamic changes, and occasionally local disturbances more or less persistent.

Thus far scientific investigators have led us. Much that is of interest and practical benefit have they unfolded, but much is yet to be discovered, and we must leave this part of the subject still in the hands of those patient workers whose future researches will clearly establish many points at present obscure.

THERAPEUTIC VALUE OF THE OPERATION.

And now let us turn to the practical part of this subject and ask what benefit does nerve-stretching confer? Or, perhaps, at the present time, we ought to ask, "Does it confer any benefit whatever?"

We shall consider this (1) by a study of statistics as to *cure, failure, danger*, etc., and (2) by a review of the opinions of medical men.

To show what nerve-stretching has done, let me read briefly three cases:

I. (By Nussbaum).—A Pole, aged thirty-five, eleven years previously fell from a height of six feet on a hard floor. He struck on his sacrum with sufficient force to produce complete paraplegia, with its attendant involuntary discharges. In time deep bed-sores developed and convulsions set in. At the time of the operation there were each day as many as one thousand clonic convulsions, during which the knees were violently drawn against the chest. The frequency and severity of the convulsions were rapidly exhausting the patient. It was then determined to stretch the crural and sciatic nerves of the right

side. After the operation convulsions in the right leg ceased and sensibility returned. Two weeks later the left crural and sciatic were stretched with the same favorable results on the left side, and in addition voluntary power over the sphincters was regained. In ten days the patient, who had been eleven years in bed, was able to rise and walk about on crutches.

II. (George W. Callender, 1874).—A man, aged forty-one, sustained a compound fracture of the wrist (1867). Twenty months later the arm was amputated at the wrist. Pain in the scar and painful twitching of muscles of the arm called for a secondary amputation, in 1869, at the elbow-joint. Pain still continued, and in February, 1871, a neuroma was removed from the stump, but without affording any relief. In July, 1872, the median nerve was divided, or excised (?), with no better effect. In January, 1874, the stump was painful, tense and glistening, and the pain extended along the corner of the median nerve, up over the neck and side of the face. Now at length, after seven years of suffering and four fruitless operations, the median nerve was bared down to the stump and thoroughly stretched. Immediately the pain ceased, the stump in a short time became normal, and the patient obtained permanent relief.

III.—But we are not compelled to travel three thousand miles to gather testimony. The operation has been done many times in this country, and several members of this Society, Dr. Dougherty, of Newark, Drs. William Pierson, Jr., and Buttner, of Orange, have contributed histories of interesting cases. One of these is a case of sciatica (Buttner) in a German, aged thirty-six years. The disease was of eight years' duration. Every known treatment at the hands of practitioners of different schools of medicine was unavailing, and the patient was steadily losing ground. The operation of nerve-stretching was decided upon and performed December 17, 1881. The right sciatic was exposed in its upper part and thoroughly stretched. The sheath was highly congested. The distention by stretching was sufficient to elongate the nerve about one and one-half inch. The wound was closed by sutures, and healing took place without suppuration. The pain immediately ceased, and except a little stiffness in the limb for two or three weeks after the operation, the recovery has been complete and permanent.

But all cases do not show such gratifying results. Failures are not infrequent, the relief is often only transient, and in some instances the symptoms have been aggravated by the stretching.

(a.)—NEURALGIAS.

We have collected of sciatica, 70 cases; of neuralgia fifth pair, 37 cases; of traumatic neuralgia, 15 cases; of all other kinds of neuralgia, 30 cases.

1. *Sciatica*.—We have 70 operations for the relief of this affection. In 1 case only did it completely fail. In 3 cases it gave but a transient relief, and in 1 case the result is not recorded. In all the others (68 cases, 97 per cent.), the patients were either cured or greatly improved. In most of these cases the disease had existed for months or years. Some of the patients were bedridden, all were more or less crippled and discouraged. With a present full of torment, and a future holding out no hope of relief, some were sinking into a despondency which would either render them an easy prey to disease, or lead them to a more pitiable end—self-destruction. If from such a hopeless, helpless wreck, we can restore over ninety-seven per cent. to health and usefulness, we will do well to value the means by which such a transformation is effected.

Just here there is a very pertinent objection as to the permanency of the results. Many cases are reported soon after the operation as cured, when a longer observation shows a return of the disease. No one more than myself feels the force of this objection. I have carefully examined the reported cases, and have communicated with many of the operators in order to verify and correct the results, and I am satisfied that the record is essentially correct. But grant that some of these cases may relapse, permanent relief is still the *rule*, and those temporarily benefited are satisfied to have had even a transient relief from pain. As one patient expressed himself, "I would be willing to have my sciatic stretched every month if it would give me as much relief as I have had for the six months following the operation."

In several of the cases the effects of a first stretching were transient, while a second stretching was followed by complete recovery. In some cases a *slight amount* of traction has been followed by a transient effect, and necessitated a second more vigorous stretching to com-

plete the cure. Or again, the force used has been too great, and has produced an unnecessary motor paralysis.

In chronic cases presenting considerable muscular atrophy the benefit is less complete. The atrophy is sometimes never entirely overcome. In those cases of central origin (cancer of envelopes of cord, etc.) less encouragement is afforded as to complete recovery. But in idiopathic cases of sciatica, those too, which have resisted all other modes of treatment, we must consider nerve-stretching as one of the most effective remedial agents we possess.

2. *Neuralgia of the fifth pair of cranial nerves.*—We have collected 37 cases, 29 of these are reported cured and 12 temporarily relieved. There were four failures, and in one instance the result is not recorded. In some instances of failure or temporary relief a subsequent excision of the nerve has been followed by recovery; although in one case (Lange) the division of the nerve in Europe, and a subsequent division some years later in this country, was followed by relief for only three months in each instance, yet an elongation done four months ago has, up to the present time, given perfect relief. In general, the result is not nearly so favorable after stretching the different branches of the fifth pair as after stretching the sciatic for sciatica. In other words, we must not expect to cure by nerve-stretching more than one-half of the cases of facial neuralgia met with. Over eighty per cent. will be either improved or cured, and about one case in every six will fail to receive any benefit whatever.

3. *Traumatic neuralgia.*—The results are very much the same as in the neuralgias not traumatic. Indeed, we do not see that the traumatism has any especial bearing upon the result. At the same time they are generally classified separately, and we have included 15 cases under this head. Of these seven were cured, four permanently improved, two temporarily improved, one failed and in one case the result is not recorded. We can say that 11 cases (63 $\frac{2}{3}$ per cent.) were cured or greatly benefited, while not over two cases (13 per cent.) failed.

4. There remain of the different forms of neuralgia 30 cases. Nineteen were cured, three greatly benefited, two temporarily benefited, three failed, and three are doubtful. Eight of these cases were accompanied by painful spasms, which, in some of the cases, were entirely and permanently

allayed by stretching. In Nussbaum's celebrated case of intercostal neuralgia there was a temporary relief (Fenger and Lee), but the patient had become addicted to the opium habit, and his otherwise enjoyable respite was marred by the carvings of an insatiate appetite. The pains, however, soon returned, and as far as nerve-stretching is concerned the case is a failure.

The percentage of cured and improved in the different neuralgias are as follows: Sciatica, 97 per cent.; neuralgia of the fifth pair, 80 per cent.; traumatic neuralgia, 66 per cent., and various other forms of neuralgia, 75 to 80 per cent.

Considering the neuralgias as a class, we may safely conclude that they are appropriately and efficiently treated by nerve-stretching. We would not, however, advise a precipitate rushing into nerve-stretching as the initial step in the treatment of neuralgia, nor shall we be disappointed if the accumulation of statistics, and the results of longer observations shall somewhat lessen the percentage of cures; but we are well satisfied that many, *very many*, of the obstinate, intractable cases of neuralgia will be by the aid of nerve-stretching no longer an *opprobrium medicorum*.

(To be continued.)

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BRIGHT'S DISEASE.

FIRST patient, a male, about fifty years of age. He states that he has been confined to the house about four months; that he has to stagger from one place to another across the floor, but that he is better now. The feet are swollen; much less, however, than they were previously. He prefers to lie on the left side at night, which may account for the fact that the left leg is swollen more than the right. The leg pits deeply. He also complains of having pain in the back. This symptom, with the weakness in the limbs which he complains of on walking, would suggest spinal disease. I have known persons with the legs considerably swollen. They could walk well enough, but when they got on the bed they could not lift their legs up. This patient says such has been his case also. That, probably, is the explanation of his awkward move-

ment, especially as he has had no paralysis anywhere else. It is true he thinks the sensation in his legs is considerably diminished, but when I pinch him he grumbles.

Then the question is, what is the cause of the swelling of his legs? That is the most marked feature of his case. The answer naturally is, kidney disease; but Dr. Wheelock informed me that he examined the urine and did not discover albumen. That may be; for persons sometimes come to me saying they have Bright's disease, been so called by their family physician, and I examine the water and find no albumen. I do not conclude that they have not Bright's disease, but continue to examine it every second or third day for three or four weeks, because I know the microscopic, the chemical and the clinical symptoms are often absent for two or three weeks in a case that is really confirmed, and then will come again. The fact, therefore, that no albumen has been found in the water is by no means conclusive, especially when we have the evidence that the œdema has been confined mostly to the legs and feet; he says he has not had any swelling of the hands.

There is an early sign of coming œdema that is, however, fallacious as a distinctive sign. I refer to the tear line. A little œdema will come on the conjunctival membrane of the lower lid, and pressing the lid against the eye, will force it up on to the top of the lid, and it will then have a little wire appearance, or the appearance of a small thread running along the lower eyelid. This patient has that. There is a little œdema of the conjunctiva elsewhere also. It goes away when you lift the lid, but comes again immediately after. He says there has been no enlargement of the abdomen.

He has had trouble in going up stairs during the last week or two, but it seems to have been due principally to the condition of his legs. He says he does not get out of breath except on some exertion.

We will examine his chest and abdomen. The fact that he prefers to lie on the left side is rather evidence against cardiac disease. Persons who have much of that trouble are very apt to lie upon the right side or back. I do not get any signs of valvular lesion about the heart, although there is a little hypertrophy of that organ. There is no pain in the chest. There is dullness behind, over the lower portion of the thoracic cavity, indicating a little

fluid in either pleural cavity. There is, you will observe, some œdema of the face and swelling under the eyes.

I think this is an instance in which it is safe to infer that there is some trouble with the kidneys, and that, at the present time, conclusive evidences are not apparent, but perhaps a week hence it will be different.

With regard to the treatment in such a case, the great point is to keep himself warm. If he is obliged to go out in cold weather, he should protect himself with an abundance of clothing. If he is not obliged to go out, it is better, in cold weather, to keep in the house. I have kept such patients in the house all winter, and directed them to keep the temperature of their part of the house at 72° F., night and day. Not so particular at night, because the bedclothes will protect them, but it is better to have it uniform. This man can not do that; he will have to protect himself as much as he can in cold weather by clothing. A steam bath is a very excellent thing, to be taken twice a day, and anybody can arrange a home apparatus for that purpose. It may be prepared by taking a tin can that will hold a couple of gallons of water, covered with some utensil; put a tube in the dome of it; connect with this tube another one, six feet long, having an angle, which will convey the steam to the wooden chair on which the patient sits while covered with blankets, fastened about the neck. In a few minutes the patient will begin to perspire, and this may be kept up say twenty minutes or half an hour, when he should be well rubbed off, and if it be in the evening, as I generally direct, he should put on his night clothes and go to bed. If he sweats a little after that, all the better. Then in the morning before he gets out of bed, he should be rubbed thoroughly with a dry flannel so as to stimulate the circulation. That stimulation of the circulation of the skin with dry flannel or some agent that is equal to it should be practiced every day, whether he takes the bath or not the night before. I was in consultation near here some years ago, and it was agreed that to sweat the patient was desirable, and we were devising a plan by which it could be carried out when the nurse asked what was wanted. It being explained to her, she said she could do that. Boil a peck of potatoes; wrap them in a cloth and lay them close to the body. She did so, and it worked very well. It is often the case that bottles of water, not

exactly hot but pretty nearly, are enveloped in damp cloths and laid alongside the body. The œdema will sometimes disappear on the use of these steam baths, but commonly it is necessary that some diuretic be used to accomplish that. All effusions that are observable in the body are easiest carried off by the kidneys, disturbing the system less than if carried off by any other emunctories that are capable of doing it.

For him, probably, as good a diuretic as any that can be perscribed is the sal diureticus, the acetate of potash, twenty grains every two hours, in water; and the infusion of digitalis, commonly a dessertspoonful, or two drachms, will be enough, taken three times a day. He can not conveniently take it with the salt, because he takes that every two hours.

FACIAL PARALYSIS.

CASE 2.—This man complains of a disfigurement of the face. He works by night and sleeps by day, and about two weeks ago, having gone to bed perfectly well, he awoke, and observed that the right side of the face was paralyzed. The right eye watered. No pain was felt, but the face appeared disfigured.

This kind of deformity, paralysis, often comes of inflammation of the theca of the seventh nerve, the portio dura, and in that case leeches are the quickest remedy that we can use, applied as near to the source of the nerve as can be done; but in this case there is no tenderness at all. I press pretty hard, to the extent of a couple of pounds weight, and he says it does not hurt him any. This is not a very uncommon affection, and it generally comes just as in this man's case; it comes in the night, and I think it is more likely to occur if there is a draft of air upon the side of the face corresponding with the paralysis. Many of these cases will be relieved without any remedy in the course of four, five or six weeks. In others it is of very considerable duration; indeed, in some it is not relieved at all, being carried for years. Relief, when it is effected, is obtained from various sources; sometimes from electricity. Medicine, I think, has no power over it at all; at least I know of none. As just said, electricity seems to be remedial in certain instances. Dr. Detmold, some years ago, invented a little electrical apparatus which he thought would act well in these cases, and I think it does. It is a

compound metal wire, containing two metals that act upon each other in a way to produce electricity. At one end is a hook which goes in the mouth, lifting the angle of the mouth up on the affected side, and at the other end is a hook that goes over the ear. He has the patient wear that continually, except while eating. It is a simple apparatus, and the saliva of the mouth probably aids in making it electrical.

You observe, as the patient smiles, how the face is drawn to the left side. There is no affection of the tongue that I can see. He can chew his food all right on either side. Sometimes the paralysis is so positive that the food will come out of the mouth when he chews with the teeth of the affected side, but it does not seem to do so in this man's case. I see some movement of the muscles of the paralyzed side, as he talks, which seems not to be entirely passive.

Some Clinical Features of Malaria

BY STANLEY M. WARD, M. D., OF ELLENVILLE, NEW YORK.

HAVING consulted much of the literature on malaria, and having conversed considerably on the subject with practitioners, I have been able to find so little that agrees with my own experience in a certain class of cases, that I venture to write this article, hoping that it may be of some service to others as completely befogged as I was when I first encountered such cases as I describe below.

The locality in which I am practicing formerly enjoyed a good reputation, as being free from malaria in all its forms; but for the past five or six years there have been very many cases of intermittents and remittents, and also the, to me, ambiguous cases whose histories I give. The cause of the sudden appearance of this class of diseases is not easy to find, and is, indeed, quite foreign to my purpose here; therefore, without attempting to discover it, I shall give briefly a sketch of three cases of malaria which it seems to me differ greatly from the forms usually described.

CASE 1.—On Friday morning, June 16th, 1882, I was called to attend C. B., male, and found the following train of symptoms: Frontal headache, tightness across the sternum and in the throat, slight, dry cough, dull pain in

the bones of both extremities and in spinal column, drowsiness all the time, with but little sleep, on account of headache; his tongue was furred, temperature at 4 A. M. 102, pulse 81, bowels regular, and appetite, which had been very poor, now voracious. There had been no chills or chilly sensation, neither had there been any remission in severity since he was attacked, Thursday afternoon, and I detected no rales of any description. He works in a veneering establishment on the banks of a canal. Some of the workmen have had well marked attacks of intermittent fever. As he had slept but little I gave gr. $\frac{1}{4}$ morphiæ sulph., and at 8 A. M. he took a capsule containing cinchonidiæ sulph., chinoidin. purif., aa grs. iss, acid. salicylic, gr. ss, capsici pulv., gr. $\frac{1}{3}$ and zingiberis pulv., gr. ss, with orders to repeat every four hours and to report Saturday night. At 7 P. M. on that day C. B. reports himself well, and will resume work Monday.

CASE 2.—Saw A. A., female, housewife, for the first time, on Saturday afternoon, June 17th. She has been sick two days, though she thinks that on Friday she did not suffer so much pain in her head. She now complains of excruciating pain in that region, worse over the frontal protuberances, pain in the bones of the extremities and back. Her appetite is poor, bowels constipated; there is some sweating, but there have been neither chills nor chilly sensations. Her tongue is furred, temperature $102\frac{1}{2}^{\circ}$, pulse 104. She was ordered five grains of calomel and three of rhubarb, to be followed by a capsule containing the same ingredients as in the other case, except the salicylic acid, which was omitted, and one-sixth of a grain of resin of podophyllin substituted. Saw her the next Wednesday, when she said she was well.

CASE 3.—E. S., female, doing general housework, was taken ill Saturday, June 24, with headache, pain in the back and limbs; there was some fever and gastric irritation, but no chill. On Sunday there was a slight remission, but on Monday she had a slight chill at nine in the morning, followed by fever. I saw her about 2 P. M.; she then complained solely of the great pain in her head, back and limbs, and also in her eyes, unless the room was darkened. There were thirst and anorexia, a furred tongue and constipated bowels; she also vomited frequently, the vomiting being especially violent if she attempted to take anything but water or lemonade; temp.

102½°; pulse 120; I prescribed calomel and rhubarb, and the capsules the same as in case number two. Saw patient a few days afterward on the street; reported herself well.

It is not to be supposed that such histories as I have given are more common here than those of intermittents well marked; on the contrary, we have to deal with malaria in all its forms. I have written these notes only with the hope of drawing attention to a class of cases in which errors in diagnosis are apt to be made. It will be noticed that I have used cinchonidia instead of quinia. I find it acts equally well in the same doses, and it offers the advantage of being much cheaper.—*Clinical Record, Philadelphia.*

Medical History of a Case of Abortion, with a Synopsis of the Criminal Trial.

BY J. FOSTER BUSH, M. D., HARV.

I WAS called, October 5, 1881, to see M. C., aged twenty, a strong, healthy girl of Irish descent, who had always enjoyed good health till the present illness. I found her with rapid breathing; abdomen tympanitic and tender; high pulse and temperature; tongue brown and dry; there was an offensive discharge from the vagina, and, upon pressure, a milky fluid exuded from the breasts. She had experienced chills, but they had not recurred to any great extent.

The history obtained was as follows: She had passed two catamenial periods; the flowing, attended with expulsion of clots, had come on between the second and third months, and it was accompanied with pain. After three days the flowing stopped, but the pains increased in severity, and so continued till the time I saw her.

On October 6th she was constantly vomiting fluid of a dark-greenish color; the temperature was 105° F., and the extremities were cold. Diagnosis: Puerperal peritonitis. Dr. W. L. Richardson saw the case in consultation. In reply to questions, the patient stated that she had gone, on September 22d, to a Mrs. Fenno, living in Somerville, and had had an operation performed, for which she paid ten dollars. This not being successful, she repeated

the visit on September 26th, when the operation was repeated at an expense of five dollars. The operation consisted of the application of a sponge on the outside of the stomach, and the passage of a tube within the vagina. The operation each time was very painful.

Subsequent to the use of these instruments an injection was given, and she drank a pint of hot spearmint tea. She was very sick on coming home the second time, and felt that she was dying.

On account of pain a subcutaneous injection of a quarter of a grain of sulphate of morphia was given. The patient died in the evening.

On October 7th an autopsy was made by Dr. F. W. Draper, medical examiner for Suffolk County, who kindly invited me to be present, and has permitted me to use the notes of the autopsy:

"External examination: The body had been in ice. A quantity of dark-brown fluid escaped from the mouth when the body was turned. The breasts were full, and milky fluid could be pressed from the nipples. The belly was distended by gas. The external genitals were slightly swollen, and were of a darker color than in health. A little thin, fetid matter smeared the other parts. The remains of a ruptured hymen were distinct around the opening of the vagina. There were some superficial excoriations at the posterior and right lateral parts of the entrance to the vagina.

"Internal examination: The heart and lungs were healthy. The investing membrane of the intestines and other abdominal organs (peritonæum) was in a state of acute general inflammation; it was thickened, reddened, and opaque; its adjacent surfaces were agglutinated; its various depressions contained nearly a quart of extremely fetid, thin, greenish-colored pus.

"The interior of the spleen, kidneys, liver, and intestines presented no appearance of disease; their external covering shared in the general peritonitis.

"The stomach contained a quarter of a pint of thin, dark, fetid fluid. The internal structure of the organ was healthy.

"The uterus, bladder, vagina, and rectum were removed together. Their opposing surfaces within the cavity of the belly were quite firmly adherent by recent inflammatory products.

"The vagina was of normal size. Its color was a little darker than natural, and its upper part showed a patch near the mouth of the womb decidedly darker than the rest. There was a little dark-colored, rather thick matter upon its lining membrane.

"The opening to the womb admitted the tip of the little finger. Around this opening were slight bruises extending one-sixteenth of an inch outward from the margin. The womb was enlarged; its cavity measured three inches in depth from the external opening; its breadth was two inches; the wall of the womb was one inch thick at the thickest. One inch from the mouth of the womb, at the inner or upper end of the canal, were two excavated ulcerations, one anterior, the other posterior; their size was nearly equal, their diameter being about five-sixteenths of an inch and their depth one-eighth of an inch; their outline was circular, and their color nearly black; the muscular tissue under them was reddened to the depth of one-sixteenth of an inch. On the inner surface of the anterior wall of the womb was a raised and reddened area of the size of a quarter dollar. The lining of the womb elsewhere was somewhat thickened, but was of nearly a natural appearance. The passages from the womb to the cavity of the abdomen (Fallopian tubes) were distended with thick pus, and their lining was reddened.

"The right ovary contained a corpus luteum of the size of a large pea."

The person mentioned in the declaration of the dying girl was arrested on the evening of October 6th. The officers found at her house a battery, which they did not disturb, but several electrodes were taken possession of, the character of which corresponded with those spoken of before, and were such as would have been likely to have been used in procuring an abortion by electricity. It is unnecessary to follow the legal proceedings in detail; suffice it to say that the trial justice and grand jury found a "bill" against the defendant, and the case came up for trial in the spring term of the Criminal Court for Middlesex County, at East Cambridge, before Chief Justice Brigham, but for sufficient cause was transferred to the June term, Judge Pitman presiding; Hon. W. B. Stevens for the government, and Hon. W. B. Gale and O. S.

Knapp, Esq., for the defense. The dying declaration was ruled out as evidence.

[I would say that hours were spent in trying to find a justice of the peace, in order to take the girl's ante-mortem statement, but just as that officer reached the house the girl died.]

An outline of the general testimony for the government will be sufficient. It was shown that, on the evening first stated, the girl visited the house of the defendant with a male companion, who waited outside till she returned, the time being about half an hour. That, on the second visit, she was accompanied to within a short distance of the defendant's house by three companions, and was there for about half an hour; and that on the way home she seemed distressed, walked slowly, and appeared different from usual. The government then traced her movements, by numerous witnesses, from this time to the time of her death, thus showing the impossibility of her having had an abortion performed elsewhere. Various police officers who made the arrest and seized the instruments were put on the stand and related the events of the evening, and identified the instruments in court as the ones taken that night. The writer was the first medical witness. He testified as to the girl's illness, and to the fact of having been present at the autopsy. As an expert he gave his opinion that the girl died of peritonitis following abortion; that the ulcerations found at the mouth of the womb could only have been produced by direct violence, and that electricity would produce such effects.

Dr. W. L. Richardson testified as to having seen the girl in consultation, and agreed with Dr. Bush that puerperal peritonitis was the cause of death. As to the character of the ulcerations he could not say, as he had not seen them; but in his judgment the *constant* current would produce ulceration, but the *interrupted* current would not.

Dr. F. W. Draper read the notes of his autopsy. He also testified that the uterine ulcerations could only have been produced by some powerful stimulant; that the stimulant in this case was probably the galvanic current.

Dr. S. G. Webber was called by the government as an expert, and his testimony I will give more in detail. It was that the galvanic current could produce ulceration;

that such ulceration would be found at the negative pole, and was caused by the decomposition of the parts; that the dark color was due to changes after the ulceration had been produced; and although ulceration of the parts spoken of could be produced by syphilis, caustics, etc., those described would correspond with those produced by the electric current; that the electro-magnetic current would be unlikely to cause ulceration, but he would not say that it was impossible; that the interrupted current was likely to produce uterine action and abortion.

This hypothetical question was then put to this witness: "Suppose that a young girl, nineteen or thereabouts, on a Tuesday night complained of pain in her back and stomach, and should die a week from the following Thursday from an abortion, when, in your opinion, was an operation, if any, performed?"

"Preceding Tuesday, within a few days."

This ended the government's side.

Dr. Hall, manufacturer of electrical instruments, testified for the defense; that he had sold the defendant a galvano-faradic battery; that it would be impossible to cauterize any part of the human body unless a very powerful battery was used, or both poles were applied to the parts; that a battery with less than forty cells would not produce a slough; that with the battery he had sold the defendant he could with safety sit on a keg of gunpowder and pass a current through it.

The defendant testified that she was an electric physician, had been in practice over twenty-five years, and was in the habit of giving electric baths to women who menstruated irregularly, or whose catamenial periods had been stopped by a cold; that she never performed abortion.

The rest of the defense was an attempt to prove an alibi on the day of the last visit.

Closing arguments of counsel and the judge's charge are omitted. Verdict, guilty. Exceptions taken.—*Boston Medical and Surgical Journal*.

The Effect of Ipecacuanha on the Uterus During Labor.

A RECENT writer in the *Medical Record* says that about two years ago his attention was drawn to an article written by a Southern physician, in which it was affirmed that

ipécac increased the expulsive power of the uterus if administered in cases of tedious labor, so he determined to give it a trial. Some time later he was called to a case of confinement. It was of a woman with her third child. She had had sharp pains for nearly four hours. He found her in a very nervous state, greatly excited, and apprehending some calamity. On examination per vaginam the os was found hard, rigid, and undilated, with difficulty admitting the finger, and just to the internal edge a constricting ring utterly devoid of elasticity. Her pains continued, but were very irregular; and after a period of two hours, no visible alteration in the rigid os was noticeable. A five grain powder of ipécac was then administered, and repeated twice at intervals of about twenty minutes. To the author's surprise the patient soon became quieter, and ceased her cries of pain, which before were sufficiently loud to be heard distinctly in any part of the house. On making another examination the os was found softened and dilating rapidly under the pains, which were now regular and strong, and labor was soon completed without difficulty. In several other cases where the pains were irregular and the os rigid and undilatable it has since been used by this observer, and with benefit. He does not think that it increases the muscular power of the uterus, but it seems, however, to have a specific effect on the rigid os uteri, softening and relaxing its fibres, as well as a co-ordinating influence on the irregularly contracting uterine muscles, causing them to act in harmony. The author goes on to say that opium and ergot are the only oxytocics of value which we have at our command; but many serious accidents have followed the injudicious use of the latter, and its effects are often far from what we desire. Hence, the discovery of any remedy which will alleviate the sufferings which the parturient female has to undergo during protracted labor and hasten its favorable termination, will be heartily welcomed.

The Prevention of Syphilis.

It is somewhat singular that in this country there should be carefully exempted from all regulation or repressive measures a single disease, or rather a set of diseases, and this not because of their insignificance, but simply because

of their mode of communication. If a man have small-pox, he is hurriedly isolated, and all possible danger to his neighbors is carefully prevented. If he have the greater disease, he is at liberty to spread it as his ignorance or his wickedness may direct.

An important distinction between the two diseases lies in the fact that one is infectious and the other contagious; and the fact that the latter, being propagated only by contact, is most frequently transferred in the act of sexual connection, makes of it so low a thing that an American community can not recognize its existence. But, unfortunately, shutting the eyes is not an effectual way of combating an evil; while the farmer slept, the weeds grew; and we do more than sleep. By positively ignoring the existence of syphilis we actually encourage its growth. If a woman have become diseased, we almost force her to infect others by denying facilities for treatment, and by exemption from hospital privileges, which, with equal persistency, we force upon others.

The more the disease is studied, the more numerous appear the ways in which it may be propagated. Cases of non-venereal syphilis may be said to be of every-day occurrence. Anything which is passed from one man to another, particularly anything which may be passed from one person's mouth to another's, may be the vehicle of contagion. The limit to the contagious powers of a syphilitic are by no means definitely settled. The difficulties in the way of its regulation are numerous, lying partially in the nature of the subject, but in great measure in the delicate sensibilities of the religious world, which refuses to consider so unsavory a subject. In this connection it is with especial pleasure that we mention the address of Dr. Gihon, of the United States Navy, on the prevention of the venereal disease by legislation, read before the Medico-Legal Society last April. To it is appended the proposed act, entitled *An Act to prevent the Spread of Contagious Diseases*, which we published on July 20th. Its noticeable feature was contained in the following:

SEC. III. That the State Board of Health, with the approval of the Governor, and the Health Board of the city of ———, with the approval of the mayor of said city, shall have power to institute and carry out all suitable measures to prevent the spread of diseases of a contagious character, and may, if deemed advisable, remove to proper hospitals selected by them all persons suffering from contagious diseases, who, neglecting proper precautions, imperil the health of the community.

Firmly as we may believe in the curability of syphilis, its increasing mildness, or the gradual syphilization of the race, it is still a serious disease, and deserves serious attention. The proposed legislative control mentioned above we have little expectation of seeing adopted; at present such an attempt at regulation would probably be a failure, but as a contribution to the discussion of the subject it is an exceedingly wise one, drawing attention to the parallels between venereal and other contagious diseases. We know of no better way to attract the attention of thinking people.—*Boston Med. & Surg. Journal.*

GLEANINGS.

THE TREATMENT OF HÆMORRHOIDS BY INJECTIONS OF CARBOLIC ACID.—Dr. Charles B. Kelsey, Surgeon to St. Paul's Infirmary for Diseases of the Rectum, New York, recently opened a discussion on the treatment of hæmorrhoids, at a meeting of the New York Clinical Society, by reading a paper on the treatment by injections of carbolic acid. The paper, which appears in the August number of the *New York Medical Journal and Obstetrical Review*, opens with condensed histories of a number of cases, after which he remarks that, beginning this plan of treatment without very much confidence in it, and with the fear of causing great pain, and, perhaps, dangerous sloughing, constantly before him, the method is constantly growing in favor with him, and the more he practices it the more confidence he gains in it. With solutions of proper strength the danger of causing sloughing of the tumors is very slight. There are no objections to this method which do not apply equally to others. He has once seen considerable ulceration result from it in the hands of another; but he has seen an equal amount follow the application of the ligature; and he does not consider this as a danger greatly to be feared when injections of proper strength are introduced in the proper way. It is applicable to all cases; is especially adapted to bad cases; and may be used where a cutting operation is inadmissible. It acts by setting up an amount of irritation within the tumor which results in an increase of connective tissue, a closure of the vascular loops, and a consequent harden-

ing and decrease in the size of the hæmorrhoid. Except when sloughing occurs, the tumors are not, therefore, removed, but are rendered inert, so that they no longer either bleed or come down outside of the body. In cases in which the sphincter has become weakened by distention, the injections will also have a decided effect in contracting the anal orifice, as injections of ergot or strychnia do in cases of prolapsus. He has used this method of treatment now many times, and has never, except in one case, had reason to regret using it, or to be dissatisfied with its results, so far as he has been able to follow them. Although slow to advocate any one treatment of this affection to the exclusion of all others, he now generally adopts this from the outset in each case, reserving Allingham's operation for any in which the injections may fail. As yet he has met with no such case. Its advantages over all other methods, provided its results prove equally satisfactory, are manifest. The patient is not terrified at the outset by the prospect of a surgical operation, is not confined to his bed, and is not subjected to any suffering. The cure goes on painlessly, and almost without his consciousness. The method requires some practice and some skill in its manipulation, in getting a good view of the point to be injected, and in making the injection properly. But this is soon acquired; and he is more and more convinced that the fear of producing ulceration is an exaggerated one, and that when ulceration is produced it is a result either of a solution of too great strength, or of one improperly administered.

DIGITAL EXPLORATION OF THE BLADDER THROUGH INCISION OF THE URETHRA FROM THE PERINEUM.—At a meeting of the London Royal Medical and Chirurgical Society, held April 11, 1882, Sir Henry Thompson reported a case in which he had successfully removed a tumor of the bladder (in a man) through a perineal section of the urethra. The patient had been operated on some time previously for stone (by lithotrity), but without complete relief to his symptoms; subsequently some phosphatic deposit was removed by the lithotrite. At this time he seized what at first felt like a calculus, and practically crushed it under pressure, but it was evidently fixed, giving the impression of partially impacted stone. As little benefit followed this operation it was decided to open the bladder. This was

done by perineal section, and, on introducing his finger into the bladder, pressure being made from above the pubes, Sir Henry recognized a tumor about the size of a chestnut growing from the opposite wall, coated with phosphatic matter. The mass was easily twisted off with a pair of forceps. Very little bleeding followed. The patient speedily recovered, and had no return of the bladder symptoms subsequent to the operation. Regarding this and other cases, Sir Henry advised that in certain cases of hematuria which was clearly vesical and was not explicable except by the hypothesis of impacted calculus or vesical tumor, an incision of the membranous portion of the urethra from the perineum, for the purpose of exploring the bladder, should be made. In a paper in the *Lancet* of May 7, 1882, Sir Henry remarks that it is only during the last few years that he has gradually realized the fact that it is possible, in not a few cases, to explore through a small perineal incision the whole, or nearly the whole, of the internal surface of the bladder with the index finger—a necessary condition, of course, is that the bladder should be empty, and that firm pressure should be made with the right hand above the pubes. The method of operating the author describes as follows: The central incision should always be adopted, and a median grooved staff, and a long, straight, narrow-bladed knife, with the back blunt to the point, should be used. Having placed the left index finger in the rectum, the knife may be introduced edge upward, about three-quarters of an inch above the anus, with or without a small preliminary incision in the skin, until the point reaches the staff about the apex of the prostate gland, where it divides the urethra for half an inch or so and is then drawn out, cutting a little upward in the act, but so as to avoid any material division of the bulb. The left index finger is now removed from the rectum, and following the groove of the staff, slowly passes through the neck of the bladder as the staff is withdrawn when exploration is made. This operation is often of benefit in old cases of cystitis, and, as well as satisfying the surgeon as to the exact condition of the bladder, often relieves symptoms where no lesions can be made out.—*Canada Med. and Surg. Jour.*

OPHTHALMIC APHORISMS.—Dr. J. J. Chisholm, of Baltimore, gives the following valuable aphorisms in a report

presented to the Maryland State Medical Society at its last session :

1ST APHORISM.—*Do not blister.* In forty-nine applications out of fifty, as I find it used by physicians at large, it is an additional and useless torture to the eye disease from which the patient is already suffering.

2D APHORISM.—*Do not use nitrate of silver.* As constantly prescribed by general practitioners, it is not beneficial in one case out of one hundred, and therefore is a very painful infliction to the ninety-nine who would have been so very much better off without it.

3D APHORISM.—*Do not prescribe sugar of lead.* In every case zinc, tannin or alum is better, and then there is no fear of having insoluble deposits incorporating themselves with the exposed surface of corneal ulcers.

4TH APHORISM.—*Always use weak solutions of the mineral and vegetable astringents* in the treatment of eye inflammations which attack the mucous surfaces, and restrict their application to conjunctival diseases exclusively. One grain of alum, sulphate or chloride of zinc, sulphate of copper or nitrate of silver, in an ounce of water, will in the majority of cases of conjunctival diseases do much more good and give much less uneasiness than the very painful five and ten grain solutions which are so often injuriously prescribed by physicians.

5TH APHORISM.—*Solution of the sulphate of atropia,* from one to four grains to the ounce of rose water, is an essential eye-drop in the treatment of acute iritis, to break up newly-formed adhesions. One drop of the atropia solution in an inflamed eye is a most valuable means of establishing the diagnosis whether iritic complications exist or not, and should be used in most cases of eye inflammation to find out whether there are any adhesions of the pupil to the lens.

6TH APHORISM.—*Eserine in solution of one grain to the ounce of water* is the remedy for purely corneal lesions.

7TH APHORISM.—When physicians are in doubt as to the character of an eye disease, they should seek a consultation from specialists who are more familiar with eye diseases than general practitioners can possibly be. Such timely aid often saves the patient a lifetime of trouble.

If physicians would commit to memory and keep at their finger ends, and ready for use, these simple aphorisms, the amount of mental and bodily suffering which

they will prevent in their eye patients is beyond calculation. While all good rules have necessarily many exceptions, they may safely follow their simple guidance.

INTRODUCTION OF ALIMENTS AND MEDICINES THROUGH THE NOSE.—Fernet and Martel (*Schmidt's Jahrb.*, 1881, 1) have made a number of experiments to demonstrate the possibility of introducing aliments and medicines through the nostrils.

For this purpose the patient is placed on his back, in the recumbent position, while the head and the upper part of the throat are permitted to fall somewhat backward. The gum hose of a common nursing bottle is then pushed into the posterior part of one nostril, and the fluid—either containing nutritive substances or medicine—slowly poured in. In consequence of the peculiar position of the body, the floor of the nasal cavity and the velum form an oblique plane, so that the fluid mentioned flows directly into the pharynx and induces swallowing. Generally, and especially if the fluid is poured in slowly, the expected result ensues with certainty, and in a manner by no means disagreeable to the patient; only when the fluid is poured in too rapidly, a few drops may find their way into the larynx, causing the well-known irritating cough.

Fernet and Martel have employed this method successfully in persons in a comatose condition, in children suffering from tubercular meningitis, and even in new-born infants, too weak to take the breast or the bottle. This method may also be successful in introducing such medicines into the stomach which, in consequence of their bitter or nauseous taste, are rejected by the patient.

Crequy recommends, for this purpose, the introduction of a flexible gum tube (catheter). If this is pushed behind the velum, the possible reflow of the fluid, by the other nostril, would effectually be prevented.

Martel reports two cases: one, where in consequence of a fall on the head, severe concussion of the brain, with trismus and utter inability to swallow, set in, and the other, a case of pneumonia in a drunkard, the patient being totally unconscious. Here the medicines—calomel and jalap in the first, musk and digitalis, in the second, case—were successfully carried into the system by the method described, and though in consequence of their

severity the cases ended fatally, the procedure itself achieved its object.—*Medical and Surgical Reporter*, August 5, 1882.

ON THE TREATMENT OF PHTHISIS BY INHALATION.—Dr. S. Dowse read a paper on this subject. He prefaced his paper by referring to the recent very valuable discovery of Dr. Koch, concerning the tubercle-bacillus; and he thought that the inflammatory theory of tubercle, and Dr. Sanderson's recent lectures at the College of Physicians on Inflammation, tended to support rather than to detract from the results of Dr. Koch's original investigations. Dr. Dowse, through the kindness of Dr. Blake, was enabled to show to the members present many forms of respirators, including one of Dr. Blake's inventions, which were useful and adapted for the purposes of inhalation. Dr. Dowse said that it was more than ten years ago when he first began to treat pulmonary consumption by inhalation; and he regretted that, until recently, he had not carried out his experiments with that care which so important a subject demanded. During the months of September, October, November, and December, he had treated his patients in the North London Hospital for consumption, by several forms of inhalation, and he almost invariably had good results. He thought, however, that the process of inhalation was far from perfect, and he hoped for better results in the future. Short histories and notes of several cases were brought forward as evidence in favor of this mode of treatment. He spoke particularly of the value of acetic ether as an inhalant; in fact, he went so far as to say this drug was, in his opinion, capable of dissolving nascent tubercle. The mixture which he generally used had the following composition:

R.—Thymol,	3iij.
Ætheris acetici,	3iij.
Ætheris sulph.,	3i.
Creasoti,	3iij.
Acidi carbolic. 3.	gtt. xv.
Terebine ad.,	3iv.

Ten drops to be used at a time for an inhalation.

He laid great stress upon continuous inhalation: for instance, two hours in the morning, afternoon and evening, as well as during the whole night. The subject appeared to be of considerable interest. A lively discussion followed.—*British Medical Journal*.

CHANCRES OF THE CERVIX UTERI.—Dr. Marcek (*Arch. Derm. Syph.*) reports twenty-four cases of chancre on the vaginal portion of the cervix. In most cases the lesion was upon the anterior lip and on the os.

The earliest stage does not present the characteristic appearances—induration, sharp, livid border, diphtheritic deposit—which the ulcer assumes at a later period. Several tubercles are often found in the vicinity of the lesion. Inguinal glandular swellings and papulæ about the labia and vestibule are not infrequent. If the consecutive symptoms of syphilis are already present the vaginal portion is firm, enlarged, the tubercles have ulcerated bases covered with bleeding granulations. If the initial lesion is situated in the cervical canal, it can of course only be discovered after ulceration or sloughing of the os. Its progress may be entirely free from symptoms. It is generally so slow that the primary lesion may still be present when the secondary symptoms have already disappeared. Cicatrization of the sore proceeds slowly and may be frequently interrupted or retrograde. Stenosis and atresia of the cervix have been observed in cases. The hypertrophy and induration of the cervical tissue may cause dystocia.

The treatment is principally local; vaginal irrigation, three or four times a day, with one per cent. solution of potassium chlorate or carbolic acid; tampons saturated with solutions of iodine, chloride of iron, and iodoform; if much infiltration of the cervix exists, painting with tincture of iodine or bichloride of mercury solution (1-10). Exuberant granulations are touched with solid silver nitrate. Stenosis of the cervix is remedied by the insertion of tents. The usual constitutional treatment is pursued.

A NEW METHOD OF DETECTING SMALL STONES IN THE BLADDER.—Dr. S. Cuthbertson Duncan has used, for about three years, the following method of detecting stone when small or in fragments. He takes a nickel-plated sound, such as is used for that purpose, and holds it over the flame of an ordinary lamp, or candle, until the point is covered with a thin black film. After it has become quite cool, it is dipped in a solution of collodion and allowed to dry. He then oils it with castor oil, and introduces it a short distance in the urethra and withdraws it to see if it be in-

jured. If not, he proceeds to explore the floor of the bladder with a sweeping lateral movement. If there be a stone or any fragments left after lithotrity, its black covering will be removed in patches, and the bright metal will show through. The author thinks this more delicate than Napier's indicator, the point of which is made of lead, blackened by chemical agents; and this very method does not impair the conducting power of the sound in any degree. A short, beaked solid steel sound is preferred, with a round handle, which has a flat disk about two inches from the end, at right angles to the curve of the beak, to serve as a guide for the direction of the point. The round handle allows it to be rotated between the index finger and the thumb, the most sensitive part of the hand—two things necessary for rapid and delicate manipulation.—*British Medical Journal*.

ATROPINE AS A CAUSE OF GLAUCOMA.—Atropine has of late years been so widely used in ophthalmic practice, both in the treatment of various painful affections, and also merely for the purpose of paralyzing the pupil to facilitate the estimation of errors of refraction, or an examination with the ophthalmoscope, that the warning afforded by Mr. Streatfield's letter, in the *British Medical Journal*, and to be found also in a case read to the Ophthalmological Society, by Mr. Snell, and reported in the same journal for July 15, has not been sounded too soon. It thus appears, on the evidence of competent judges, that a strong solution of atrophine, such as is the officinal solution of the *British Pharmacopæia*, is capable of producing glaucoma in some cases. A way out of the difficulty is afforded by Mr. Streatfield, who points out that a solution very much weaker than that provided by the *Pharmacopæia* would suffice to produce sufficient mydriasis for all ordinary purposes. Dr. Ringer has, we believe, made some experiments on this subject, and has found that a dilatation of the pupil, lasting some hours, can be produced by a solution containing what a chemist would consider a mere trace of atropine. A solution formed by diluting the pharmacopœial "liquor" with two or three hundred times its bulk of water, would be sufficiently strong.—*British Medical Journal*, July 29, 1882.

SCIATICA.—Mr. Jonathan Hutchinson, in a clinical lecture on "sciatica," sums up his conclusions as follows: In

nineteen cases out of twenty in which the diagnosis of "sciatica" is suggested there is no affection of the sciatic nerve whatever. They are simply cases of arthritic disease of the hip in one or other of its various forms—acute gout, chronic gout, rheumatic gout, subacute rheumatism, or chronic senile rheumatism. Both by the public and the profession these cases are constantly called "sciatica." Our workhouse infirmaries are full of chronic cases under that name, and I speak advisedly when I say I feel sure that they are almost all examples of *morbus coxæ senilis*. Of the cases of "sciatica" which are not hip-joint rheumatism, some are probably affections of the fascia or periosteum near to the hip; a minority are possibly affections of the sciatic nerve itself. In these latter it is the sheath of the nerve which becomes painful. The pain may be darting, or may radiate, but it does not pass down the nerve-tubules or in any way make the patient conscious of their course. The diagnosis of true sciatica is to be based upon the discovery of tenderness restricted to the trunk of the nerve, and involving a considerable part of its course. Examples of this are decidedly rare, and their recognition without risk of error is a matter of great difficulty.—*Medical Times and Gazette*.

DACRYOLITHS.—Concretions formed by the deposit of the saline elements of the tears, are but rarely observed. Prof. H. G. Cornwell, of Columbus, Ohio (*American Journal of the Medical Sciences*, for July, 1875), reports the case of a man, aged forty-six, who complained of an interference with the escape of the tears from the left eye, which had annoyed him for ten years. An examination revealed lachrymal conjunctivitis, the lachrymal punctum slightly everted, its orifice of normal size and the walls of the canal somewhat thickened. No accumulation of tears in, or any evidence of inflammation of the lachrymal sac. Suspecting a stricture of the canaliculus this passage was slit up by means of a delicate pair of scissors, one blade of the instrument passing readily through the canal without obstruction. On the following day on attempting to separate the edges of the incision to prevent their union, by means of Bowman's probe held vertically, the instrument struck a gritty substance, which proved to be one of four dacryoliths which were arranged bead-like along the floor of the canal. The canal itself, after their

removal, was found to be much enlarged as a result of this calcareous deposit.

THE REMOVAL OF NASAL POLYPI.—Dr. Morrell Mackenzie discusses the various operative methods of removing nasal polypi, and states that the mode of treatment he generally adopts, is to remove the polypi with his punch-forceps and then to apply the electric cautery to the base of the growths. This method will generally succeed in effecting a rapid cure, but when recurrence repeatedly takes place, if the growth springs from one of the turbinated bones, he removes a portion of the bone from which the polypus originates by means of a special instrument which he has devised for the purpose. It consists of fine hollow forceps having toothed edges on one side and smooth edges on the other, whilst between the two a sharp cutting blade can be rammed down. The portion of the turbinated bone required to be removed is seized by the forceps, the smooth blade being on the outer side. The knife is then pushed home and the portion of the bone easily removed. He wishes it to be understood, however, that though he considers the removal of a portion of one of the turbinated bones perfectly harmless, he regards it as an operation rarely required.—*Arch. of Laryngology, Phila. News.*

THE USE OF IODOFORM IN SYPHILITIC ULCERS.—The author arrives at the following conclusions, after discussing the use of iodoform in the above special trouble, and greatly lauding its good effects: 1. Iodoform acts much more promptly when applied to chancres in powder than in collodion. 2. Chancres or ulcers when covered with crusts must be softened before the application of iodoform. 3. Collodion in conjunction with iodoform often actually shuts the skin out from the action of the iodoform. 4. Iodoform is impotent to prevent induration or other syphilitic appearances following an initial lesion.—Weintraub, *Diss. Centralblatt f. Med. Wissentsch*, 1882, No. 24.

OZONE AS AN ANÆSTHETIC.—Binz experimented at first with cats, rabbits and frogs, and found that all of these animals were affected in a greater or less degree, sleep in many cases having followed the inhalation of ozone. He also caused six healthy persons to inhale ozone through a Siemen's tube; in two cases quiet sleep followed after inhaling six to eight minutes, in one or two cases violent coughing set up; and in one case spitting of blood followed.

In the other cases no tendency to sleep was produced, although the inhalations were kept up only a short time.

Binz compares the effects of ozone to that produced by dilute alcohol.—O. Binz, *Berlin Klin. Wochenschr.*

SYMPATHETIC OPHTHALMIA.—Dr. S. C. Ayres reports three peculiar cases in the *Archives of Ophthal.* In the first, the affection came on about a year after the enucleation of the originally diseased eye. Examination showing that the stump of the optic nerve was painful, a resection was performed, when all sympathetic trouble disappeared and seven years later had not returned.

In both the other cases, *persistent poulticing* was followed by relief of pain and ultimate recovery.

THE TREATMENT OF CATARRH OF THE BLADDER.—I treated eight cases of cystitis, originating in part from gonorrhœa, and partly chronic cases, going out from acute catarrh, with three per cent. solutions of hypermanganate of potassium, injected into the bladder once daily. All of the cases progressed successfully.—E. Boegehold, in *Deut. Med. Wochenschr.*

BOOK NOTICES.

TRANSACTIONS OF THE MICHIGAN STATE MEDICAL SOCIETY.

FOR THE YEAR 1882.—No. 2. Vol. VIII. 8 vo. Pp. 284.

The Society met in annual convention in the opera house at Ypsilanti, May 10, 1882, at 10 o'clock A. M., the President, Dr. J. H. Jerome, in the chair. Capt. E. P. Allen delivered the address of welcome, in which a high tribute was paid the medical profession in contrasting its modes with those of the rest of the world. He said: "In your work of love, giving freely and openly of your knowledge to relieve and prevent the sufferings of man, you do what no other profession does; and this trait is so well marked that it has become a proverb that 'the physician is always fighting his own bread and butter.' No sooner is a discovery made, or a new combination of old ideas, by men outside your calling, than the government is invoked to give its broad seal of protection, and such discovery, though of the greatest value to man, yet, in a measure, is made a monopoly, and the great public must pay tribute to its owner aside from its legitimate worth.

The physician, by a code framed by himself, is bound to give his best thoughts and investigations to his brethren 'without money and without price,' that thereby suffering may be relieved and men made happier. Your code forbids concealment."

There were present during the session about ninety members. Besides the address of the President, papers were read by quite a number of gentlemen, the majority of them able and instructive. Dr. O. P. Christian gave the "History of Two Cases of Mal-Presentation;" Dr. C. B. Burr read a paper on the "Insanity of Masturbation," which he illustrated by the report of numerous interesting cases; Dr. Foster Pratt presented a paper on the "Legal Responsibility of Surgeons for Ununited Fractures," prompted by a trial in which damages to the amount of \$2,700 and heavy costs of trial, were recently given in one of the Circuit Courts of Michigan, by the verdict of a jury, against a doctor who treated a fractured humerus which did not unite. No little information is contained in the paper. Dr. Leartus Connor read a paper on "Optic Neuritis, Considered in some of its Relations to Cerebral Tumors.—Full History of a Case." Quite a number of other interesting and instructive papers were read, but we have not space to mention them.

The present volume of Proceedings shows that the Michigan State Medical Society is composed of active, able men, who take a deep interest in the science of medicine, and are energetic in doing all they can to advance it.

G. W. Topping, of De Witt, was elected the next President. The society adjourned to meet at Kalamazoo, at such time as the President and Secretary might hereafter appoint.

TEN YEARS' EXPERIENCE IN THE TREATMENT OF STRICTURE OF THE URETHRA BY ELECTROLYSIS.—By Robert Newman, M. D., Surgeon Northwestern Dispensary, New York. 12mo. Pp. 44.

This is an interesting little work fully described by the title page. Numerous cases are reported in evidence of the efficiency of the mode of treatment of strictures by electrolysis. It would probably be interesting to quote some of the reports, but our readers will gain a fuller idea by procuring the work itself.

EDITORIAL.

THE WEST VIRGINIA STATE BOARD OF HEALTH'S DEFINITION OF A REPUTABLE MEDICAL COLLEGE.—The Legislature of West Virginia has passed a law establishing a State Board of Health, making a part of its duties to grant licenses to, or register physicians to practice medicine within the limits of the State. Such practitioners as are graduates of *reputable* medical colleges are not subject to examination, but those who have no diplomas, it is enacted, are to be examined by the Board, as to their fitness to practice, before receiving a license or being registered. If, on examination, the non-graduate should not be found qualified, the Board has power to refuse a license.

We presume the Legislature merely meant by the expression "reputable medical college," a college that is manned and managed by respectable physicians, and whose tickets and diplomas are recognized by other medical colleges. That the general or popular reputation of a college only was had in view by the Legislature, and that it did not contemplate that the Board should pass upon the course of study, manner of imparting knowledge, text-books used, if any at all were used, theories taught, or anything at all pertaining to its operations in the way of instructing, in determining whether a particular school was reputable or not, when a graduate of it applied to be registered, is evident from the fact that the graduates of not only regular colleges are expected to be registered under the law by the Board, but also graduates of homeopathic, eclectic, physio-medical colleges, and these, no doubt, are registered every day by the Board. If refused to the latter, we have no doubt the mill would soon be set going grinding out registrations by the courts.

Most assuredly to the present President of the West Virginia State Board of Health, Dr. James E. Reeves, the dogmas and modes of treating diseases of homeopaths and eclectics are obnoxious and contrary to the truth. Those of the first mentioned, especially, he looks upon as trifling and miserably inefficient. "Not to put too fine a point upon it," to quote from Dickens, he regards homeopathy and eclecticism as miserable frauds upon the community, gotten up to pander to the prejudices of the ignorant, and ought to be stamped out. But, notwithstanding these

views, we can not but believe his Board recognizes the diplomas of the colleges of such so-called systems of medicine, for we have never heard that homeopaths and eclectics have been refused permission to practice medicine in West Virginia. How then does he justify himself in passing individuals holding diplomas from such schools, and permitting them to practice medicine in his State, when the law requires that the colleges issuing the diplomas shall be "reputable," unless by alleging that the law means by "reputable" those colleges that are generally or popularly recognized as reputable, and that as a sworn officer of the law, who is required to do its bidding, he can not set up a standard of his own, and then proceed to ascertain, in each case, by examining the curriculum of the school, its times of the year of imparting instruction, the lengths of its sessions, its dogmas, etc., whether or not it is reputable.

If, then, the Board of Health, to which Dr. Reeves belongs, can not examine the dogmas taught by a school of medicine in order to judge whether or not it is "reputable," it certainly has no power to make any investigations whatever pertaining to it—its methods of instruction, etc.—other than to inquire in regard to its general standing in the community at large.

But it seems that "by a unanimous vote of the West Virginia State Board of Health the following preamble and resolutions were adopted, defining the words 'reputable medical college,' as they occur in the law creating the Board:"

1. *Whereas*, It is one of the special duties of the State Board of Health of West Virginia to protect the people against incompetent medical practitioners; and,

Whereas, The said Board is charged with authority of law to reject applicants for medical certificates who are graduates of *disreputable* medical colleges, unless they, the said applicants, shall appear before the said Board, and pass a satisfactory examination in all the branches of the profession; and,

Whereas, The test or proof of proper reputation of a medical college is the occupancy of all needful grounds and buildings set apart for lecture and laboratory work; the possession of such mechanical and scientific apparatus and appliances as are necessary to illustrate and supplement medical lectures; a *de facto* corps of capable professors, whose curriculum embraces not only both lectures and examinations in the eight ordinary branches of medical education—namely, anatomy, chemistry, physiology, hygiene, surgery, obstetrics, practice of medicine, materia medica, and therapeutics—but also the additional and important departments of hospital and clinical instruction; a preliminary examination as a condition of matriculation; the requirement of actual (not merely nominal) attendance upon at least

eight-tenths of the lectures of *two* full winter courses; dissection, practiced during one full winter course; and finally, strict adherence to the measure of requirements for graduation established and published by its officers and faculty; therefore,

Resolved, That the State Board of Health of West Virginia will not hesitate to refuse recognition of all diplomas granted by disreputable medical colleges.

Resolved, That nothing less than the definition or measure of requirements expressed in the foregoing preamble, or a very close approximation thereto, will be accepted by this Board as proof of the "good reputation" of a medical college.

2. *Whereas*, This Board has before it a communication published in the *Philadelphia Medical News*, July 22, 1882, over the signature of "D. N. Kinsman, M. D., Dean of Columbus Medical College," which gives the standard of requirements upon which the diploma of that college is issued; and having other evidence of indisputable character that the said Columbus Medical College has grossly violated its published requirements for graduation; therefore,

Resolved, That this Board can no longer recognize Columbus Medical College as worthy and "reputable" within the meaning of the law from which this Board has received authority to pronounce upon such cases; and all persons applying for registration on diploma issued by said Columbus Medical College will be rejected, unless they, the said applicants, submit to an examination by this Board, and are found duly qualified to practice medicine, surgery and obstetrics in West Virginia.

Resolved, That this action is based wholly upon recent proceedings on the part of the Faculty of Columbus Medical College, and there is nothing in it which is intended to, or should in any manner, reflect upon the professional standing of graduates of that school prior to the year 1882.

Now, are we mistaken in regard to the power of the West Virginia State Board of Health, in determining whether a medical college is reputable, to go back of the general or popular reputation of a school in the profession and community at large, and to examine into its affairs, for instance, to investigate as to whether it honestly or not, under all circumstances, enforces all of its rules; whether it ever suspends any of them when there might seem to be proper occasion to do so; whether instruction is given by seven or eight chairs, or five or six; whether it holds its sessions in spring and summer, or fall and winter? If we are mistaken, and the Board has the right to make the investigations we have mentioned, it certainly can proceed further and inquire and decide upon the dogmas taught—and if finding that the doctrine of "*similia similibus curantur*" is held to, and proclaimed as containing the germ from which all truth in the science of medicine springs—that it affords the only true scientific basis on which to found a treatment for the cure of disease—it has the right to pronounce such a dogma as false and dangerous, and calculated to work great injury, if carried out in practice, to

the health and lives of the good citizens of the State of West Virginia. But we have not heard of the Board's taking any action whatever in the case of homeopaths, declaring their colleges disreputable. We think that Dr. Reeves should be called upon to explain this delinquency, in case he does not show that he has been using his personal efforts to bring it about.

We have no doubt but that there are not a few medical colleges among those professing to be regular, that do not deserve to be regarded as "reputable." There are thousands of individuals of high standing in the community, and, of course, looked upon as reputable, who have scarcely a single element in their characters entitling them to be so considered. Without refinement of feelings, coarse and brutish in their instincts, unable to place any value on anything that does not administer in some way to the animal nature, they are, nevertheless, courted and catered to, and, as far as position is concerned, are far more "reputable" than very many who, in all the higher qualifications of mind and morals, are as much above them as the sun is above the earth. But when the question is placed before us as to who is "reputable" and who is not, we are compelled to act upon the facts as they exist and not upon what *ought to be* and what *ought not to be*. We are willing to subscribe to very many of the whereases and resolutions of the action of the West Virginia Board, of those which treat of medical schools generally, as properly describing the duties of medical colleges. We would even be willing to go further, and say that four years' study should be required, three of which should be spent in receiving college instruction, whose terms should extend through nine months of the year, and one year in hospital and dispensary practice. But while the Board largely sets forth what each college *ought to do* in order to make it "reputable," does it describe the real facts existing in the practices of the *actual reputable* colleges, of such colleges, which, if not reputable, there is no such thing as a reputable medical college in the United States? In order to be instructed, we will compare some of its requirements with the facts which exist in some of the undoubtedly "reputable" medical colleges.

The Board, in the action passed by it, requires that each "reputable" college shall have a *de facto* corps of eight professors, whose duties are to instruct in as many

departments of medicine and surgery, We are not able to speak from the book, as we write, for we do not happen to have an announcement of the institution at hand, but when we last consulted one, Jefferson Medical College, which, with the University of Pennsylvania, is the most "reputable" medical college in the United States, had but *seven* professors. We grant that there were fifteen or twenty lecturers enrolled as instructors, but there was the same old number of professors that there was sixty or seventy years ago, when physiology had made so little progress that it was merely tacked on to anatomy, and what little instruction was given in it, if there was any at all, was given by the professor of anatomy, who never was able to give a complete course in his branch proper. The lectures of the lecturers are largely optional with students to attend. The "*de facto*" corps of capable professors" are the seven professors, and the curriculum of instruction is embraced in their lectures.

Again, it will be noticed that the West Virginia Board makes it a necessary condition for a medical college to be "reputable," that it subjects all proposing to attend its lectures to a preliminary examination previous to matriculation. If it should attempt to enforce this condition, it will have to place every medical college in the United States, unless it be Harvard, on the list of *not* reputable. Jefferson, Pennsylvania University, Bellevue, etc., make no examination of students as to their attainments, or any inquiry as to fitness, except to require, for filing, some certificates as to moral character, and time of commencing study, which all do. Some ten or twelve years ago, when the American Medical Association met in Cincinnati, a convention of teachers was held, at which we recollect very distinctly that the venerable Prof. Gross, of Jefferson College, spoke against a proposition to examine all applying to enter a college as students preliminary to matriculation. While he thought a person should have at least a good English education and some knowledge of the Latin language, previous to beginning the study of medicine, yet he was of the opinion that it would be folly to make the requirement.

In its third *Whereas* it will be noticed that the Board requires "the requirement of actual (not merely nominal) attendance upon at least eight-tenths of the lectures of *two* full winter courses." So far as we are informed, all

"reputable" medical colleges in this country require attendance upon not *eight-tenths* of the lectures of two full terms, but attendance upon *all* the lectures of two full terms. We know that not unfrequently illness of the student himself, or illness of some of his friends, may cause him to miss a number of lectures, for which he will be excused. But, although indulgence is extended not unfrequently under such circumstances, yet the validity of the rule is not regarded as at all affected under the circumstances. We have known students to begin their attendance upon a term several weeks after the session had commenced, and receive credit for a full course. We have known this to occur in the case of not merely doubtfully "reputable schools, but also of those whose repute no one would call in question. We presume that even in such cases the validity of the rule, requiring attendance upon the entire lectures of two full courses, was not regarded as infringed upon. But, whether it was or not, who is to decide if the Faculty are not? If a student presents himself at Jefferson College (we mention this college simply because no one in this country will call in question its being "reputable") a week or two after the holidays, and upon attending the remainder of the term, having attended a term previously at another college, is graduated, with whom rests the right to call in question the propriety of the proceeding? If the gentlemen composing the Faculty are respectable gentlemen, of undoubted integrity, must it not be believed that they had substantial reasons for suspending their rule in the case mentioned? Would not Dr. Reeves, on having brought to his attention an instance in which Jefferson Medical College had graduated an individual under precisely such circumstances as we have mentioned, hesitate very much before he would recommend his Board to enroll it as a disreputable college? We have no doubt the Doctor is a gentleman of high standing, of undoubted integrity, conscientious in the discharge of his duties, and a lover of his profession, anxious for its advancement, but at the same time he is very much disinclined to making himself ridiculous. Therefore we think that even a State Board of Health should "hasten slowly" in branding any medical school, manned by men of good standing in the profession, who are regarded as gentlemen in the community in which they reside, as disreputable. Branding men as

disreputable does not make them such by any means. In fact, the way in which the West Virginia State Board of Health uses the term "disreputable," exhibits great ignorance of its meaning. It really amounts to only an epithet, which the Board may lavish around pretty freely, for awhile, among the "small-fry" colleges, but would probably decline altogether to apply to the "larger fish."

In conclusion, we will call attention to only one more matter in the Board's action. It will be noticed that it requires that the sessions of a "reputable" college be held during the winter. Why, then, has it not numbered among the "disreputable" colleges Long Island College Hospital, and some half dozen others whose sessions are held during the spring and summer months. The Long Island College Hospital is now advertising its session, for 1883, to begin January 24. It is essentially a spring and summer college, holding only one of the months of its five months' term during the winter. The Board, according to its requirements, must regard it as disreputable and decline to recognize its diplomas, or "back down."

We have not the slightest feeling as regards this action of the West Virginia State Board of Health. We feel it incumbent upon us, however, as a journalist, to notice and comment upon what certainly seems to us a most remarkable and high-handed proceeding of a few individuals, who arrogate to themselves the right to examine into the internal affairs of all the medical colleges of the country; to state the conditions on which they can receive and matriculate students; the time of the year for holding lectures; the length of the sessions, etc.; and to brand, without any right of appeal, all such as do not acknowledge their authority, as *disreputable*, declining to recognize the diploma issued by them, and compelling them to carry the brand until these self-constituted censors see proper to graciously remove it, on promise of good behavior in the future.

Here are half a dozen persons, or less, whom no college has had a voice in selecting, assuming to prescribe rules and regulations for all the medical colleges of this great country, and taking the responsibility of introducing new features in medical education, which a congress, composed of representatives from all the colleges, did not dare to act upon.

We will submit it to our readers if the action, which

we lay before them, of the West Virginia State Board of Health, is not most remarkable. We think there can be but one view of the matter. Under the influence of an impulse, without having waited for the "sober second thought," it has ventured upon a proceeding in which it will not be able to sustain itself. So long as there will be occasion only to fulminate its anathemas against some young college, the Board may seem to sustain itself very well; but when it attempts to thunder, if it should dare do so at all, at any apparent irregularity on the part of Pennsylvania University, Harvard, Bellevue, Jefferson, etc., it will only provoke laughter—while silence will bring upon it contempt. It may be said that the older institutions of high standing are never amenable to charges of irregularity—real or seeming. On the contrary, not a few have been brought to our attention in the last few years. We have in our mind one which excited for a time considerable indignation. An individual started traveling through some of the Western States, having himself heralded in the larger towns, before arrival, as a physician of wonderful skill, who had cured diseases which many of the most eminent physicians had failed to benefit. It was ascertained that he had recently obtained a diploma from one of the oldest colleges, and of the highest standing in the United States, and that, too, without ever having attended any lectures at any college except those he heard during the last two or three weeks at the school from which he had obtained the diploma. After considerable protesting, from leading physicians, for conferring the degree of Doctor of Medicine upon such an unworthy person, an officer of the institution that had done it, published a statement explaining the cause. He stated that the individual, although he admitted that he had no tickets to prove it, had claimed to have attended one or more courses of lectures at some medical college, which had ceased to exist; that he brought with him letters from several leading physicians of his State (Iowa, we believe), speaking of him in the highest terms as a successful practitioner of medicine, and a gentleman; and that he had exhibited a number of very well written contributions to the current medical literature.

Now, what would be the action of our West Virginia Board in such a case as we have detailed, if reported to it? Would it cite the Faculty of the college before it

for trial? or would it pronounce the college *disreputable* without trial? If it should issue a summons, would the Faculty, under the circumstances, give it any attention, even though it was able to make as valid a defense as we have recited? But, in the case mentioned, would the college have been justified in conferring the degree of M. D. if the party had not been a fraud and his story had been true? Some would consider that it would have been, while others would not; especially if it had been some younger school that had done it, and not the one that did. The judgment in such case is consequently a matter of opinion, which the West Virginia Board would have no more authority to settle than any three or four men acting as a self-constituted Board of Censors.

But we have prolonged our remarks far beyond what we had designed, and probably beyond what the importance of the subject merits. Still, we consider that such assumption as the West Virginia State Board of Health has taken upon itself, demands some consideration.

As the action of the Board, which we publish, embraces the resolution adopted, pronouncing the *Columbus Medical College* a *disreputable* college, our readers, who have not heard of the embroglio, will no doubt be curious to know some of the particulars in regard to it. For their information we will state some facts which we have gathered from a pamphlet issued by Dr. Baldwin, who is one of the parties involved. We learn from this pamphlet that a doctor residing in West Virginia applied to the State Board of Health, of which Dr. James E. Reeves, of Wheeling, is President, to be registered as a practicing physician. As he was not a graduate of any medical college, as required by the law of the State, he had to submit to an examination. The examination, it seems, was unsatisfactory, and he was refused registration. Immediately after his rejection he went to Columbus, Ohio, and entered the *Columbus Medical College* as a student. In about four weeks he was in possession of a diploma, and was demanding to be registered by right of a diploma—the law making all physicians, who are graduates of “reputable” medical colleges, qualified for registration without examination. The Board, however, refused his second application, basing the refusal on the ground that the *Columbus Medical College* not having enforced, in this case, the usual requirements of the medical colleges for

graduation, was not a reputable school; and then proceeded to adopt the paper which we publish, setting forth what constitutes a "reputable" medical college—that it should hold its sessions at certain times of the year, should have eight professorships, should hold examinations preliminary to matriculation, etc. In justice to the *Columbus Medical College* we will state that they claim that the party whose graduation by them the West Virginia State Board of Health objected to, had exhibited tickets showing that he had previously attended a full course of lectures at the Starling Medical College, of Columbus; that he brought letters from two quite prominent physicians of his State, speaking of him in high terms; that he was a member of the State Medical Society of West Virginia, and had represented the Society in the American Medical Association; that he was a Trustee of the only Lunatic Asylum of the State; and, finally, that he passed a better than an average examination on the various branches of medicine taught in it and other medical colleges; and, so far as the papers of the written part of the examination are extant (the examination of some of the chairs was oral), they publish questions and replies, so that all may judge of its character. The written examination embraces some four or five chairs—the rest having been oral.

That our readers may not suppose that we have any interest or prejudices in the embroglio existing between the *Columbus Medical College* and the West Virginia State Board of Health, we will state that we have no personal acquaintance with a single one of the parties on either side. We have never had the pleasure of meeting either Dr. Reeves or Prof. Hamilton, but have known of both gentlemen very favorably for a long time.

DR. ROBERT KOCH'S DISCOVERY.—We think that it is an excessive estimate when it is estimated that one-seventh of all human beings fall victims to that "merciless destroyer" of the human race, tuberculosis, and that of the productive classes in middle life fully one-third die of this scourge. The mortality, as the result of the disease, is undoubtedly very great indeed, so much so that anything new in regard to it becomes immediately of great interest. What will not a man give for his life? for of what value is anything if there is not life to enjoy it? He,

who will discover a remedy for consumption, will confer a greater boon on the human race than any man has been able to bestow.

Amid the darkness that envelops the pathology and treatment of tuberculosis, something like a ray of light seems to have been shed in the recent discovery of Koch, of Germany, a young and enthusiastic microscopist. We have reference to his discovering a *bacillus tuberculosis*, which may lead to finding some method of curing the disease. It may seem singular to many that this organism has not been found before, for thousands have been busy for years searching with the microscope, if, peradventure, something might be disclosed that had been overlooked. But all experiments tried so far with the view of detecting the real cause of tuberculosis have been unsuccessful, for the reason that all the usual processes of coloring pathogenic micro-organisms failed in tuberculosis; so that all efforts to isolate and cultivate the virus of tubercle were necessarily frustrated, and Cohnheim was forced to admit, it is said, in the latest edition of his work on general pathology, that the direct proof of the tubercular virus and its tangible demonstration was a problem unsolved to-day.

It is stated that Koch in his investigations also at first made use of the former methods, and met with the same want of success, till he at last, almost by accident, was induced to leave the beaten path, and to try another, which happily led to positive results. We are told that he first directed his examination to the detection of any foreign parasitic bodies which might possibly serve as pathogenics, and he really succeeded in finding, by a peculiar process of coloring of his own, in all tissues which were the seat of morbid alteration by tubercles, *characteristic bacteria until then unknown*.

The method of procedure by him is as follows:

The objects to be examined are first prepared in the usual way for the detection of pathogenic bacteria, and either spread, dried, and heated on the cover-glass, or cut into slices after hardening in alcohol. The cover-glasses, or the slices, are then placed in a coloring solution of the following composition. Two hundred cubic centimeters of distilled water are mixed with one cubic centimeter of a concentrated alcoholic solution of methyl-blue, and well shaken, and then two-tenths cubic centimeter of a ten

per cent. solution of caustic potash are added under continuous shaking. This mixture must not cause any precipitate or sediment, even after having been kept for several days. The objects to be colored are left in this solution from twenty to twenty-four hours. If the coloring solution is heated in the water-bath up to 40° C., the length of the time may be shortened to from one-half to one hour. A concentrated aqueous solution of *vesuvin*, which has to be filtered each time immediately before using it, is then poured over the cover-glass, which latter, one or two minutes later, is rinsed in distilled water. When the cover-glass is taken out of the coloring solution, the pathological object upon it has first a dark-blue color, the coloring being in surplus; but after treatment with the vesuvin solution this blue color disappears, and the specimen assumes a light-brown tint. If now placed under the microscope, all parts of animal tissues, especially the contents of cells, nuclei, and their products of decomposition, have a brown color, but the bacteria of tuberculosis appear in a beautiful blue tint. Koch found that, with the exception of the bacilli of lepra, under this process even all other bacteria take on a brown color. The contrast in color between the brown of the tissues and the blue of the tubercle-bacteria is so great that the latter are immediately recognized, even if present in very small numbers only.

In a very similar way the slices have to be treated. From the solution of methyl-blue they are placed into the filtered solution of vesuvin, kept in this from fifteen to twenty minutes, and then rinsed in distilled water till the blue color has disappeared and the slices have assumed a brown tint. They are then freed of their water by absolute alcohol, cleared up in oil of cloves, and either examined under the microscope in this oil, or placed in Canada balsam. In these preparations the tubercle-bacteria also appear of a blue tint, while the tissues have a brown color.

These bacteria are, however, not only colored by methyl-blue; with the exception of brown coloring matters, they are acted upon also by other aniline colors, if made with an alkaline solution; but the bacteria appear best with methyl-blue. In the procedure described, instead of the potash solution, sodium or ammonium may be substituted, from which the deduction can be made that no importance

is to be attached to the potash, but that a strong alkaline solution is absolutely necessary. It has been found that, if the percentage of the potash solution is still increased, the bacteria appear where the weaker solution did not bring them to light; but a stronger alkaline solution has such a damaging influence on the tissues themselves that it can be employed with advantage only under special circumstances, and after an earlier examination has been made with the ten per cent. solution.

Koch says that the bacteria so treated are very peculiar in appearance. "They have a rod-like shape, and belong, therefore, to the group of bacilli. They are very thin, and from one-fourth to one-half as long as the diameter of a red corpuscle; but sometimes they may grow to a length of fully the diameter of a red blood corpuscle. As regards their shape and size, they are remarkably like the bacilli of lepra, but differ from them in being somewhat more slender and pointed at the ends. Besides, the lepra-bacilli are colored by the nucleus-coloring process of Weigert, while the tubercle-bacilli are uninfluenced by the same. At all points where the tubercular process is either beginning or in rapid progress, the bacilli are found in large quantities; they form then small, compact groups, sometimes arranged in bundles, frequently being met with in the interior of cells, and often presenting the same picture as the lepra-bacilli, collected in cells. But, besides, numerous free bacilli are also seen; especially on the edges of larger caseous *foci* the bacilli are observed in masses, and not included in cells.

"As soon as the acme of tubercular eruption is past, the bacilli are rarer, are met with only in very small groups, or single at the edge of the deposit, while a little farther away the blue color becomes lighter and lighter, showing evidently bacilli already dead or dying. They may disappear altogether, but this is rare; and if they are absent, it is only on places where the tubercular process has come to a standstill.

"If giant cells are present in the tubercular tissue, then the bacilli are usually collected within them. In cases of very slowly progressing tuberculosis, these giant cells are commonly the only places in the interior of which the bacilli can alone be found. In such cases the majority of giant cells encircle one or two bacilli. The picture presented under these circumstances is in reality a surprising

one: In long-continued passages of a slice, fresh groups of giant cells appear rapidly before the astonished eye; almost every individual cell encircles in its wide space, filled with brown-colored nuclei, one or two very diminutive blue rods, which float nearly in the very center of the giant cell. Often the bacilli are met with in small groups of giant cells, sometimes only in single cells, while numerous other giant cells do not contain any. Then, as can be judged from their size and position, those cells which are inhabited by bacilli are young, of recent formation, while those free of these bacteria are older; and it may be supposed that once these also contained bacilli, but that the latter either died or passed over into their permanent condition, of which later more will be said. Analogous to the formation of giant cells around foreign bodies, as vegetable fibres and *Strongylus* eggs, as described by Weiss, Friedlaender, and Lanlamie, we have to suppose the relation of these cells to be to the bacilli. Undoubtedly the giant cells were formed to encircle the bacilli as foreign bodies; and if in a tubercular tissue such cells are found empty, the supposition is justified that they once contained the bacilli which gave origin to them.

"The bacilli may also be recognized unprepared by coloring. For this purpose it is necessary to examine specimens of such parts as contain large quantities of bacilli—*i. e.*, a gray tubercular nodule from the lung of a guinea pig, having died from inoculated tuberculosis. The object is placed with blood-serum into the hollow of an excavated slide. The bacilli appear then as extremely small rods, showing molecular motion, *but not the least self-motion.*"

GRADUATES OF CINCINNATI MEDICAL COLLEGES IN PENNSYLVANIA.—A recent number of the *Medical and Surgical Reporter* publishes a list of the medical colleges of which physicians of Pennsylvania are graduates. By a law of the Pennsylvania Legislature, all practitioners of medicine are compelled to register, reporting at what college they graduated. In looking over the list, we find the following colleges of Cincinnati mentioned, with the number of graduates of each that are practicing medicine in Pennsylvania:

Cincinnati College of Medicine and Surgery, 31; Medical College of Ohio, 30; Miami Medical College, 34; Ec-

lectic Medical Institute, 32; Physio-Medical College, 11; Pulte Medical College, 8; University of Cincinnati (we never heard of it), 1; Cincinnati Medical College, 14. We have never heard of the latter, and have an idea that the number should be added to that of the *Cincinnati College of Medicine and Surgery*, as its name is sometimes shortened by being called the *Cincinnati Medical College*.

DOCTOR.—The Philadelphia *Medical News* discourses as follows in regard to the Doctorate:

“As to the term ‘doctor,’ its restriction to practitioners of medicine and surgery, and its habitual use by them and by the public, as a distinguishing designation, is, to some extent, an Americanism, and is probably due to the fact that, while in this country, every respectable physician must be a doctor of medicine, the lawyer is not always a doctor of laws, and the clergyman is but rarely a doctor of divinity. Originally, a merely honorary appellation conferred upon certain masters of arts, it was extended first to law, and then to divinity, but it was not until the fourteenth century that, either in England or on the continent, it began to be conferred in medicine. It has not been monopolized by our profession here or elsewhere, nor employed for purposes of display, or gratuitous advertisement, but is simply an involuntary recognition by the public of the absorbing nature of the practice of medicine, and of the devotion to it which is so almost universally manifested by its followers.”

THE ANTAGONISM BETWEEN STRYCHNIA AND OPIUM.—Dr. C. Harrison relates a case in the *Lancet*, which well illustrates the antidotal power of opium over strychnia. A man who had for some time been drinking very hard, mixed up a packet of vermin killer (containing $\frac{3}{4}$ of a grain of strychnia) with about a teaspoonful and a half of laudanum, added some rum and drank the mixture. He was seen about four hours after taking the poison, when he presented evidences of strychnia poisoning. He was given an emetic, which caused him to vomit freely, after which chloral hydrate sufficed to control the spasms. The case is interesting, as, after a poisonous dose of strychnia taken under the most favorable circumstances for absorption, fifty minutes elapsed before any symptoms be-

came manifest, and the man was alive four hours afterwards, although he had received no treatment. No doubt a fatal result was prevented and the intensity of the symptoms modified by the laudanum.

Boys.—We extract the following from a paper read before the late American Social Science Association:

“From nine to ten hours of sleep are required by the majority of boys. To retire at ten and rise at six gives a minimum allowance for the oldest boys. Study before breakfast should rarely be allowed. To rise and sit an hour in a cold, badly-lighted room is enough to take away the appetite for breakfast. About eight hours is a maximum requirement for study and recitation combined in the case of older pupils.

“It is needless to say that a boarding-school ought to be in the country. But this very circumstance may entail special risks in a sanitary sense. Sewerage, which may be presumed to be well cared for in any good-sized city, is specially difficult to manage in places where there are no drains, and where public sentiment has not reached the point of demanding drains.”

CARBOLIC ACID IN BLOOD POISONING.—The French surgeon, Declat, has recently been making some noise about his discovery of the value of hypodermic injections of carbolic acid in blood poisoning. He extends its value to scarlet fever, smallpox, typhoid fever, etc., and declares that the potent little syringe enables him to “laugh at” these diseases. This is the extravagance of enthusiasm. There is some value in the method, but a limited one. Nor was Declat its originator. Four years ago Dr. N. B. Kennedy, of Texas, used and wrote upon the advantages of these injections, and in April, 1881, he read a paper before the Texas Medical Association, in which he claimed priority of all others in its employment.

WE see petroleum highly spoken of as a topical agent in diphtheria. It is a rapid solvent of the false membrane, and possesses antiseptic properties. Its odor renders its use disagreeable, but the reports of its great efficacy should cause it to be further tried.

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ORIGINAL CONTRIBUTIONS.

Legal Responsibility of Surgeons for Ununited Fractures.

BY FOSTER PRATT, M. D., OF KALAMAZOO, MICH.

DAMAGES to the amount of \$2,700, and heavy costs of trial, were recently given in one of our Circuit Courts, by the verdict of a jury, against a doctor who treated a fractured humerus which did not unite. Plaintiff's declaration charged, in substance, that the non-union was caused by the Doctor's "careless and negligent treatment." He was not alleged to have been "unqualified" as a surgeon, but "careless and negligent." The alleged malpractice consisted in the kind of dressing used by the Doctor defendant, and in his general management of the case. These were pronounced, by Prof. Maclean, of the University, an expert witness in the case, to have been "bad surgery," "meddlesome surgery," and measures that did not "give a good chance for union." Upon expert opinion, of this general character, given by Dr. Maclean and others, the verdict was based.

Inasmuch as the non-union of fractured bones, especially the humerus and the femur, has many recognized causes besides "bad surgery," the history of this case is essential to a proper discussion of it, and to a thorough understanding, by every doctor liable to have the care of a broken bone, of the extent of his legal liabilities if the bone fails to unite. This history, as proven on the trial, and here succinctly but fully given, is as follows:

Frank Burgert, the plaintiff in the case, was twenty-

eight years of age, well developed physically, and apparently healthy. At Three Rivers, St. Joseph County, in this State, on the evening of the 21st day of December, 1880, the ground being frozen hard and rough, partly covered by ice but no snow, Burgert was driving a team, hitched to a lumber wagon loaded with one thousand feet of green pine lumber—lumber and wagon proved to weigh about 4,000 pounds. The team ran from the public highway, through a gate, into a lumber yard. As the wagon passed through the gate, the left fore wheel struck a strong gate post which suddenly but partially arrested the progress of the wagon. Burgert, sitting on the front part of the load, was thrown forward between the horses to the ground. The left hind wheel of this heavily loaded wagon passed over his left arm just above the insertion of the deltoid muscle, contusing the flesh and fracturing the humerus. The fracture was proven to have been oblique, compound, and comminuted. The obliquity was from within outward and downward, and so located that the sharp point of the upper fragment, lying on the outside, reached down to the deltoid insertion, while the sharp point of the lower fragment, somewhat comminuted, was thrust through the skin, on the inner aspect of the arm, about two inches above the deltoid attachment. The location and obliquity of the fracture were such, with reference to the antagonism of the muscles involved, that while the deltoid carried the lower fragment outwards, the pectoral and dorsal muscles drew the upper fragment inwards, and thus, by their opposing action, held the fractured surfaces in apposition and in contact, so long as they were prevented, by proper dressing, from slipping past each other in the direction of their diameters.

Dr. L. F. Lake, of Three Rivers, happened to be at the office of the lumber yard, on business, when the accident occurred. He was the family physician of the proprietor of the yard by whom the injured man was employed, and took charge of the case.

Burgert was carried, in a buggy, a few rods to a neighboring house. Here he was stripped and examined and the nature and extent of his injuries were found to be as already described. The first dressing consisted: first, of a primary bandage from the hand up to the flesh wound in the arm—the wound, at this time, was bleeding freely and received special dressing; second, of padded splints

(shingles were used, being at hand), one on the outside of the arm from the outer condyle, at the elbow, up to and slightly above the acromion process—one, nearly as long, on the posterior aspect of the arm—one, in front, from the bend of the elbow to the upper end of the humerus—and one short one,* from the inner condyle at the elbow up to the flesh wound; these four splints were firmly fastened at three points—in the middle, at the lower ends and close to the axilla, by strips of bandage (sneeringly called "strings" by plaintiff's counsel) tied around them and the arm; third, of a sling supporting the forearm, in its entire length, from the neck; and fourth, of a pillow rest for the forearm when sitting or lying.

This dressing, so far as the upper arm was concerned, was carefully changed daily because of the bleeding and other conditions of the contused flesh, until December 27th. For eight days following—that is, from December 28th to January 5th—from the seventh to the fifteenth day after the injury, the suppurating surface of the flesh wound was cleansed by antiseptics, etc., but the main dressings were not disturbed. January 8th, eighteen days after injury, the swelling having notably decreased, the outer bandages were tightened but not removed. On January 11th, three full weeks after the injury, the Doctor took his patient some five or six miles, by cutter, and without any discomfort, to the patient's home in the country. January 16th he changed the bandage on the forearm, and on January 24th the entire dressing was removed and renewed, giving careful passive motion, on both occasions, to the elbow. February 3d, six weeks after injury, the regular dressing was removed, a safety support was applied around the arm, the sling was renewed, and the patient dismissed.

During the first twenty hours after the injury, the patient had some pain, but after that he was free from pain and remained during the treatment entirely comfortable at all times, day and night. No accident happened to loosen dressings or disturb the arm. When dismissed by the Doctor, February 3d, *Burgert could, without help, raise the extended arm outwards to an angle of about forty-five degrees from the body, and the humerus, on*

*This short splint was, at times, replaced by binder's board, and at times omitted entirely.

measurement, appeared to be equal in length to the sound arm. Such force as the Doctor thought safe to apply developed no want of union nor any noticeable defect in the kind of union.

On May 3d, four months and thirteen days after the fracture, Burgert went to work in a paint shop at Three Rivers where he earned fair wages, for the work done, for three weeks. He used the brush with his right hand and carried his paint pot in the left. One morning, *about the last of May*, while lying in bed, he discovered that his injured arm was not straight—or, rather, that *it would bend* at the point of fracture.

June 2d, five and a half months after the injury, Burgert presents himself at Ann Arbor, was examined by Prof. Maclean and exhibited by him to his class. Dr. Maclean testifies that he found the bones “very freely movable at the seat of the fracture” and that there “did not seem to have been any attempt at union.” The operation of resection was performed on Burgert, in the usual way, by Dr. Maclean, the ends of the bone having been sawed off and the arm placed in a plaster cast. Burgert remained in the hospital at Ann Arbor, under Dr. Maclean’s care, some four or five weeks, and when discharged *there was no bony union.*

The testimony given by Dr. Maclean, on the trial, as to the condition of the ends of the fractured bones when he cut down on them, is highly significant and important. The ends of the bones he says, “were not very far apart,” “they were smaller than they ought to have been”—“there seemed to have been some absorption of the bone”—“*each bone tapered to its end*”—and each end was covered with “cartilage.” “There was a small scar on the inside of the arm which looked as though the bone had struck through some time or other.”

This completes the essential features of the history of this part of the case; but there is another phase of its constitutional history, important to the surgeon, which can be more intelligently discussed after considering the various causes of non-union.

The literature of the profession is singularly meagre on the subjects of non-union, delayed union, and disunion of bones—especially meagre on the constitutional causes to which these unfortunate results are often attributable.

But almost all the more pretentious text-books agree in their enumeration of the commoner causes. They all agree in stating the important fact, and our common experience approves the statement, that non-union after fracture is a rare occurrence; no matter what the surgery may have been, whether *good, bad* or *indifferent*, this bad result rarely follows. Bad surgery often, very often, leaves a bone crooked or short, or delays the cure, but it is seldom so bad as to wholly defeat nature's efforts to unite the fracture. Experience also agrees that the humerus and the femur are more often than other bones the subjects of this bad result.

When bony union fails, the conditions characterizing the fractured ends are various. In one case they are united by a fibro-cartilaginous formation, often quite abundant; in another they are loosely joined by fibrous ligaments; in another there is no union at all, the loose ends of the bones are diminished in size or they are tapering and very movable; in another the ends are rounded and covered by a dense membrane; and in yet another we find the typical pseudarthrosis or false joint.

It is agreed, also, that the causes of this condition—this failure to repair bone with bone—are local and general.

1. Frequent motion, however caused, whether by the restlessness of the patient, by the want of proper appliances, or the ignorant and unskillful use of proper ones, is undoubtedly a cause of non-union, provided the motion be sufficient to seriously disturb the reparative process. But the surgical experience of our late war, during which our wounded men were often moved great distances, by water or by rail, demonstrates that it must be a very great degree of motion that can defeat nature's reparative efforts. It is a well known fact that though a fractured clavicle is constantly subjected to motion—unavoidable motion—it very rarely fails to unite.

2. Separation of the fractured ends, by great loss of bony substance or by too great extension and counter-extension, seems to be responsible for the result in a few cases. Muscles, tendon, or detached portions of bone interposed between the fractured ends, produce similar results.

3. Disease developed in the bones themselves by the injury that fractured them may have the same effect.

4. Tight dressing, so tight in its first application or by

subsequent swelling as to impede the circulation, is another cause.

5. The use of the limb before the permanent callus is fully formed is said to be another cause, and so too, cold applications too long continued.

6. But in the writer's experience the most common of the local causes of this result seem to be found in the injury or the destruction of the nutritive artery, especially in the humerus and femur, and in nervous injury or derangement. So far as the first of these causes is concerned, his experience was found wholly in military surgery. It is easy to understand that the compound, comminuted fracture of the long bones, caused by a bullet, may occasionally fail of union whether the nutritive artery be destroyed or not. But the difference in the degree or the extent of *effort to repair*, when the nutritive artery was injured and when it was not, was quite noticeable. The abundance of provisional callus present, in such cases, when the artery was intact, and the scanty supply of the same reparative material when the direct circulation of blood to either or both fragments was cut off, were too suggestive of the probable causes of non-union in many cases of civil surgery to be overlooked or ignored. Amputation of limbs, after an effort to save, gave abundant opportunity, by careful dissection, to note these differences and to trace them to their true or their probable causes. Attention need scarcely be called to the fact that in the humerus the nutritive artery enters near the middle of the shaft and runs mainly downward toward the lower end of the bone, and that when fracture occurs at or above the middle third, the upper fragment, for a while at least, must suffer for want of its proper nourishment. In the femur, on the contrary, the course of the nutritive artery is upwards from its entrance and a middle third fracture leaves or may leave the lower fragment without a due supply of blood.

Nervous injury and disturbance, as one of the local causes of non-union, may be advantageously considered in another connection.

But authors also agree in attributing the failure of bony repair of fractures to several constitutional causes. For example:

1. Pregnancy and lactation are mentioned, and both may be sub-divided before we reach the true cause; as in

pregnancy the real cause may be found in general debility, or in a disturbance of reparative nutrition by a morbid nervous condition, causing a supply of bone-making material insufficient for both mother and foetus. In lactation the cause may be general debility, or it may be a drain of phosphate of lime, through the mammary glands, so great as to prevent, or at least retard, the repair of the mother's own fractures. The writer has found this latter cause in three cases, where union was prevented until lactation was relinquished.

2. Syphilis and the strumous diathesis are mentioned by authors as hindrances to bony repair.

3. Fragility of bones—the cartilaginous element being deficient and bones are easily broken—may be a cause. The opposite condition, called rachitis or rickets, in which the limy element is scanty, may stand in the same relation.

4. Age seems to bear some strange relation to this subject. Dr. Geo. W. Norris, for many years one of the chief surgeons of Pennsylvania Hospital at Philadelphia, publishes a table of 112 cases of non-union, which shows that 14 were twenty years and under, 53 *between twenty and thirty*, 21 between thirty and forty, and 24 over 40 years of age. This seems to show that the age when men are supposed to be most vigorous and most capable of repairing physical injury, furnishes nearly half of all the cases of non-union—or else that this period of life furnishes half of all the fractures, which is not true—or else that the constitutional conditions tending to prevent union are most active at an age when the vital powers of repair are ordinarily the best. The presumptions, therefore, that non-union of fractures occurring at the age of greatest vigor must be due to causes not constitutional, seem to be flatly contradicted by the facts.

5. Baron Larrey asserts that season, high atmospheric temperature and local malaria are causes of this result, and cites the surgical history of Napoleon's Egyptian campaign to prove it.

6. Scurvy and an impoverished state of the blood, whether caused by bad or insufficient food, or by bad digestion or nutrition, are relatively frequent causes of defective bony repair. These causes may wholly prevent union, or they may produce disunion of bones once united. Authors cite many cases illustrating both results. Miller's

Principles of Surgery, speaking of the absorption of callus, after having been once formed, leaving the bones ununited, says: "Disjunction (of bones) may be the result of constitutional disorders entailing a remarkable tendency to absorption of all recent structures, whether in the hard or soft tissues * * * as in scurvy." Lord Anson, describing the effects of scurvy on ship-board, says, of one man, "the callus of a broken bone, which had been completely formed for a long time, was found to be dissolved, and the fracture seemed as if it had never been consolidated." Doctors Budd, Desault, Morgagni, Schilling, Mantelli, and Bivard report similar results from scurvy and other depressing agencies. During our late war we had abundant evidences of this effect at Chattanooga, after the battles of Chattanooga and Mission Ridge, fought, on our side, by soldiers scurried and impoverished by bad and insufficient food, after having been besieged for months in that stronghold. Men (healthy except these conditions) lost teeth without decay—they become brittle, and were easily broken or crumbled by ordinary mastication—and when wounded, their bones united but slowly under the stimulus of rich food and a supporting treatment, or did not unite at all.

7. The essential importance of proper nervous action or energy, to the healthy performance of all physical functions, is too well understood to make it necessary to spend time in proving that its disturbance or its insufficiency is, or may be, a cause of ununited fracture. The cases of delayed or prevented union when the same violence—such as a fall—that caused the fracture, impaired or disturbed the nervous centers, are numerous. The war also furnished many examples of this result, when fracture of the long bones was found in connection with severe wounds or injuries of the head or spine. The writer had repeated occasion to observe this fact during service.

8. But there is a class of cases, too little considered, and therefore too little discussed, in which an abnormal or defective condition of the bony system (often hereditary or congenital) is either caused by or is concomitant with insanity or some other form of mental impairment. A failure to assimilate, insufficient quantity, from proper food, the phosphor compounds that constitute from twelve to fifteen per cent. of the brain tissue, or the phosphate of lime, that furnishes more than fifty per cent. of the

weight of our bones; or the excessive waste of the same elements by morbid and excessive secretion; may be the common cause of mischief in the brain, resulting in melancholia or dementia, and also of a defective or diseased condition of all bones, both being caused by a deficiency of phosphorus or of its compounds.

Dr. Penel reports a case of fractured thigh, with apparently perfect union after forty days, in which the callus was suddenly destroyed, and in which, simultaneously, there was a large greenish deposit in the urine, found to be phosphate of lime. Placing the limb again in splints, it again united, to be again disunited after two months. The daily administration of half a fluid drachm of nitric acid corrected the secretion, and after four months the case was discharged cured.

Dr. C. B. Porter, of Boston, reports a case of fractured humerus which not only failed to unite, but which was *wholly absorbed*, not a vestige of the humerus being left. Years after, this man died insane. In the West Riding Reports (England) for 1871, Dr. Crichton Browne speaks of defective bone and disturbed bony union as a disease "in which the control of the nervous system over nutrition may be distinctly traced." In the St. George's Hospital Reports for 1873, Dr. Moore describes a case of osteomalacia associated with acute mania, confirming an observation made in the Sussex Asylum Report for 1872, that "there is a probable connection between brain disorders and bone degeneration."

The case reported showed a remarkable amount of phosphor compounds excreted by the kidneys. On post-mortem, "the bones of the face and calvaria were peculiarly soft, the ribs thin and elastic."

Returning now to finish the constitutional history of Burgert, (the case now specially under review) I present the following interesting facts: His mother has been insane for years and is now a patient at Kalamazoo. His father, also, is reported to have been once or twice insane. A few years since, Burgert himself was insane and for months a patient in the asylum at Indianapolis. When the trial in this case began, he seemed quite rational and gave his evidence clearly and, in the main, correctly; but before the trial was closed he became maniacal, and, I am informed, he so remains. The form of insanity in both parents, not to speak of his own, strongly suggests the

existence of an inherited constitutional defect, in him, of those nutritive functions which supply the phosphor elements and compounds to both brain and bone. But whether these disturbances, coexisting in him, were due to a common cause or not, the conclusion is irresistible, that deficient or disturbed *innervation* did seriously impair nature's reparative effort after his original injury and also after the operation for resection.

The purpose of this paper to enumerate and to discuss, briefly, the various *causes* of non-union of fractures, does not require any detail of the various modes of treating the unfortunate result. But before passing to the application of these facts to our legal responsibilities, it may be remarked that good results, from any of the various methods of treating non-union, are so very rare that surgical opinion is strongly drifting to the conclusion that these frequent failures of reparative operations and measures indicate, in a large majority of cases, that constitutional conditions are wholly responsible for the original failure. Dr. Neudorfer, a distinguished Prussian army surgeon, says: "Pseudarthrosis, as a rule, is an evidence of a constitutional disease." (I take leave to suggest that *defect* would be a better word than "disease.") Billroth's Surgical Pathology asserts that bad treatment "does not necessarily lead to pseudarthrosis, but it may act as a second cause when the general conditions of nutrition predispose to it." But the fullest recognition of the responsibility of constitutional conditions for non-union is given by the high authority of Sir James Paget, in his able work on surgical pathology. He says, in his discussion of the non-union of bones, that "in other cases the failure seems to occur earlier. *No reparative material is formed*, and the fragments remain quite disunited. This may be the result of accidental hindrances of the normal reparative process; but it sometimes appears like *a simple defect of formative power*, a defect which, I believe, can not be explained, and which seems the more remarkable when we observe the many changes which may, at a later time, be effected, as if to diminish the evil of the want of union."

From all this it appears that the causes of non-union are very numerous, and, in many cases, difficult to detect even by the best of surgeons. It appears, too, that non-union often occurs after the most skillful treatment. It

also appears that even bad treatment seldom defeats nature's uniting power, although it may be responsible for a crooked result. These facts being established, what warrant has any surgeon, testifying as an expert, in a suit for malpractice, to declare that non-union, in such a case as has been described, with treatment as described, is due to "bad surgery" or to "meddlesome surgery?"

Prof. Maclean had had unusual opportunities, as an expert, to investigate the nature and the history of this case. He performed on Burgert the secondary operation of resection five and a half months after his original injury, and *failed to get any bony union*. His description of the condition of the fractured ends, when exposed for resection, is clear and full, and it is conclusive, according to the best authorities, of the presence of constitutional defect. He found the bones "very freely movable at the seat of fracture;" "there did not seem to have been any attempt at union;" the ends "were not very far apart;" "they were smaller than they ought to have been;" "there seemed to have been some absorption of the bone;" "each bone tapered to its end;" and "each end was covered with cartilage." And yet, on cross-examination, he testified, emphatically, "*I do not think it was owing to the constitution.*" Previously, on direct examination, he had testified that he did think it was due to "bad surgery."

Granting now, for the sake of the argument, that the surgical dressing, in this case, was not theoretically the best, nor altogether like that "pet way" which every surgeon has of "fixing things," how can the expert testify that non-union was caused by "bad surgery" because the dressings *admitted of motion*? The patient himself testified "there was no motion of the bones;" that "after the first few hours it always felt well;" and, after the first day, "it never hurt him at all." This was fully confirmed by his nurses, not to speak of the doctor defendant. Or why attribute the bad result to "bad surgery" because the "primary bandage" was liable to cause swelling and pain? It was in proof that there was no noticeable swelling or pain. Or why call it "bad surgery" because, in the absence of the "rectangular splint," there might be motion of the arm fragments," when it was admitted, by the patient, that he "never felt any motion?" Or why charge it to "bad surgery" because the arm was not

bound and held by a "clavicular bandage" or a "body bandage," when it was clearly proved that the possible evils, which these bandages might prevent, were avoided by the care and attention of the patient himself? But it is useless to follow out all these minor details. We hasten on to a more cheerful phase of this history.

It is true—fortunately for the doctor defendant—the verdict against him was set aside by the Judge and a new trial was granted. His Honor, Judge Pealer, in his opinion setting aside the verdict of the jury, ably points out the deficiencies of plaintiff's evidence from a legal standpoint, and, with singular clearness, he also points out its deficiencies from the surgical standpoint. Without attempting to quote the entire opinion, passages from it will be found to be wholesome reading. He recapitulates certain facts as follows:

"The freedom of plaintiff from all pain from the time defendant produced the extension and dressed the fracture on the second day until several weeks after defendant discharged the patient"—"the fact that at the time the arm was bared, measured, and compared with the other, in the presence of others, the non-union was not discovered by the surgeon, patient, or friends, and that several weeks after the defendant quit treating plaintiff, the plaintiff was taken with pain at one time and that of this he says, 'that he had no positive recollection of hurting it'"—"and the further fact that he did not, until after this and after he had worked for some time in the manner stated by him, discover or learn that it was ununited."

"But," he continues, "the question to my mind in this cause is, was there sufficient evidence, in the case, to show that defendant's acts *caused* the non-union? and, if so, were they acts for which defendant is chargeable? That the defendant was attentive and manifested great interest in the case, and kindness toward the plaintiff, there is no question. There was no negligence in the general sense claimed, and it is not alleged that he lacked qualification. His error, as alleged, if any, was one of judgment, it would seem."

"The points relied on were, that the primary bandage was used, that the splints known as short splints were used, and that they were fastened on by 'strings,' and that the arm, although put in a broad sling with a rest,

was not fastened to the body, and that the dressings were removed too frequently."

"As to the first point, the witnesses, on the part of the plaintiff, mentioned several results that were likely to follow or be produced, such as swelling, irritation, etc., and these they declared to be the only objection to the use of that bandage. There was not an item of evidence tending to show that any such results did follow in this case.

"As to the use of the short splints, it was admitted that they were sufficient, if they kept the ends of the bones in apposition; and it nowhere appears but that they were kept so, so long as splints of any kind were used, and that they were used over the usual period of time, under all the testimony, can not be questioned.

"As to the use of the 'strings,' it was admitted by plaintiff's witnesses that it would make no difference what kind of a string was used, only so that the splints were kept in place; and there was not an item of evidence in this case to show that they were ever out of place in consequence of any want of fastening, or from any other cause.

"It was also admitted that the sling was proper and sufficient if the arm was kept quiet. There was no proof to show that any injurious motion followed by reason of the want of fastening to the body, and plaintiff says he kept it quiet and had no pain until long after he was discharged, and until long after it should have been united, according to all witnesses, and all agreed that motion enough to be harmful would produce pain.

"I believe it was admitted by plaintiff's witnesses (possibly Maclean can be claimed as an exception) that removing the dressings would do no harm if care was used and the arm carefully handled; and no one testifies to any want of care in removing or placing the dressings, or that any evil results followed, at any time, in consequence, such as pain, etc., and defendant testifies he did use care.

"Independent of the testimony of the defendant and his witnesses, tending to account for the non-union, it is, I think, a serious question whether there was not another link required in the testimony of plaintiff to fasten responsibility on defendant in consequence of these items, even allowing the fact to be that the means were not well chosen or applied, as claimed by the plaintiff. Should

not some of these evil results which the witnesses claimed would have followed these several items of treatment been shown, in order to show that non-union was the result of their use? And, in their absence, how can it safely be said that they were harmful, and produced the non-union discovered nearly six months after—so certainly said as to be safe in denying this motion?

"The nature of the case was such that it required great care on the part of the jury and, now, caution on the part of the court.

"In the first place, the bone fractured was said by all to be the most difficult of all bones to unite when fractured. In the next place, the fracture was caused by a crushing weight or force, and take all the testimony on this point, the defendant had a difficult task to perform from the first.

"The question was, first, as to the location of the fracture, whether in the shaft or surgical neck, as to its nature, whether simple or compound, and whether transverse or oblique. All hypothetical questions on the part of the plaintiff, put for the purpose of getting an expression of opinion from the surgeons as to the treatment in this case, were based on the assumption that the fracture was in the surgical neck, was transverse, and possibly simple; and on the part of defendant, on the assumption that it was in the shaft, was compound and oblique.

"These two lines of opinion given, were thus based on a different state of facts, embracing three disputed questions in each. A very careful consideration and analysis of the testimony was required in order to properly apply these different opinions of the experts. If the facts on which they were based were in whole or in part not parallel to those in this case, then their weight should have been discounted accordingly; but, with his arm dangling at his side, how could this be done? I think, much more than the weight of the testimony tended to locate the fracture in the shaft rather than in the surgical neck; and if the fracture was in the shaft, I think the testimony tending to show that the treatment was proper was at least equal to that tending to show it was not sufficient.

"The verdict as it now stands is a very serious matter to the defendant. It is not only for a large amount, but it is ruinous to him, and the plaintiff's arm is not restored by it. It is true that if the defendant caused the non-union beyond question, then the verdict or the amount of

it should not be questioned. But there is no proof pointing certainly to the cause that produced this result on the part of the plaintiff, and the jury were left to infer the cause. On the other hand, the testimony on the part of the defendant pointed out causes, and gave many reasons for inferring that the non-union was produced by these.

"The grounds on which such verdicts rest may be more carefully scrutinized than verdicts in ordinary cases.

"I deem it best to grant a new trial."

Mr. President and gentlemen, this history of a case, of a trial and its results, is full of interest to each and all of us. You may be called any day to treat a broken limb. If when and because the bones do not unite you are subject to suit for malpractice, you may suffer damages and professional disgrace from a verdict founded, possibly, on the testimony of one whose position, more than his professional knowledge, gives his opinions influence—factions influence—with the jury. You may, on such evidence, be held responsible in heavy damages, as for malpractice, because of the constitutional defects of your patient—defects which you can not move nor control and which the average jury neither knows nor can fully understand. It is, in one sense, fortunately true, for people and surgeons, that instances of non-union of fractured bones are of rare occurrence; but *we* are in especial danger because of the very rarity of the result. The people, from whom juries are drawn, are not familiar with this peculiar misfortune and its many causes, and they find it easier to blame the doctor than the constitution of his patient.

The opinions held and testified to in this case by a member of this society and detailed in this paper, are legitimate subjects of professional criticism and discussion. If, after full discussion, they are found to be scientifically sound, we should know it and govern ourselves accordingly; but if they are unsound, it is incumbent on us to proclaim that the medical opinion of this state, and the weight of medical judgment everywhere, are against his conclusions; to the end, that the forms of law may not become the means of injustice to other doctors who may happen, unfortunately, to have patients whose vital powers are not sufficient to repair their broken bones. And if more such cases occur and any of us be called to testify as experts, we shall find a safe guide in the wise utterance of Dr.

Norris, of Philadelphia, whose treatise on "Ununited Fractures" is declared, by Dr. Frank Hamilton, to be the "most complete and reliable monograph on this subject contained in any language." To this careful and modest but scientific and skillful surgeon, one of the writer's mentors in surgery, grateful acknowledgments are hereby made of the great benefit received from his teachings on this and on many other subjects. This conscientious surgeon declares: "*So often, indeed, does non-union occur after the most regular treatment, that we should be cautious in ever attributing this state of things to any fault of the surgeon.*"

On Nerve-Stretching.*

BY. W. J. CHANDLER, M. D., SOUTH ORANGE, N. J.

Continued from last number.

(b.)—SPASMODIC AFFECTIONS.

Next to the neuralgias, the spasmodic affections offer a favorable field for nerve-stretching.

1. *Mimic spasms; spasms of the seventh pair of cranial nerves, or tic non douloureux de la face.*—There are 14 cases reported; 12 cures, 2 relieved (Hahn). The duration of the disease was from one to ten years. The facial nerve was stretched in all cases except one (Davidson's—infra orbital). The situation at which it was exposed was just at its emergence from the stylo-mastoid foramen. In one case it was exposed anterior to the ear (under the zygoma). The spasms ceased in all cases immediately after the operation. Facial paralysis followed in *every case*; and while it was ultimately recovered from, its duration was never less than two weeks, and, in one instance, it continued for five months.

It is well, then (as suggested by Artaud and Gilson) to weigh this fact in considering the advisability of the operation in individual cases, and to warn patients of the temporary inconvenience they must expect. We conclude, then, that nerve-stretching is a very proper procedure in these cases, inasmuch as it has never entirely failed, and, in nearly ninety per cent. of the cases has wrought a complete cure.

2. *Torticollis, or spasmodic affections in which the*

spinal accessory has been stretched.—There are 11 cases; 7 cured, 3 relieved and 1 unrelieved. In all cases the disease had existed for many years; in one case (Southam), twenty-three years. In one (Studsgaard), the movements of the head were rotary; in four, nerve-stretching alone was performed; in six, exsection was combined with stretching. The results seem rather to favor the combined operation, although we think the operators were perhaps a little hasty in following with excision so soon after stretching, especially as two of the cases, in which stretching alone was done, were cured. In all these cases except one, the spinal accessory was the nerve stretched. Southam gives an account of the method of exposure and stretching of the nerve (*Lancet*, November, 1881).

We have included one case by Blum, in which a tremor of the leg was cured by stretching the sciatic. The patient was a girl of eighteen years, who had been hysterical from childhood. For four months the right leg had been in a constant state of tremor, and, while walking, became œdematous and congested. Rest in bed relieved the œdema, but the tremor persisted. The right side was anæsthetic, while hyperæsthesia existed on the left side. The sciatic was painful on pressure. The tremor ceased, immediately after the stretching, sensation returned, and motility was unimpaired.

(c.)—CONTRACTURES.

There are 5 cases in the table; 2 cured, 2 failed, and 1 died during the operation, from the entrance of air into the veins. There are a number of cases of other diseases accompanied by contracture of the limbs, in which nerve-stretching has been done; but the results do not seem to be very encouraging, so far as the correction of the contracture is concerned. Nussbaum's case (No. 5) stands as a bright exception. We have not cases enough to pass judgment as to the propriety of the operation, further than to say that it is admissible and might be undertaken when other means have failed and circumstances do not contra-indicate it.

(d.)—PERIPHERAL PARALYSIS.

Thirty-nine cases are found in the tables; thirty-three of these were due to anæsthetic leprosy, all of which were more or less improved. Reports of these very interesting cases are found in the *Indian Medical Gazette* and

in the London *Lancet*. The permanency of the improvement it is not yet possible to safely affirm, as Bomford (*Lancet*) says in only a few instances has he been able to observe the patients for any length of time afterward. In one case which he reports the improvement persisted after a lapse of four months, so that the patient was able to do hard manual labor. Wallace reports a case (Fenger and Lee) in which recovery of sensation was perfect, the discolored skin became normal, and pain entirely disappeared. At the end of two months these conditions still prevailed, and the prospect of permanent recovery was encouraging.

There are three cases of infantile paralysis, two of which were not improved; one (Simon) was greatly improved. The boy, five years of age, had for three years suffered from a partial paralysis of the right leg. Treatment had been of little service; electricity had been used for two years without much benefit. Stretching the right sciatic was followed by rapid muscular development and a great improvement in the mode of walking. Dr. S. thinks the procedure is harmless, and, in many cases, may render aid otherwise unobtainable.

The three remaining cases of paralysis were paralysis of the hand and arm. The ulnar, median, and radial were the nerves stretched. Two were much improved and one was entirely cured. These results are unexpected and decidedly encouraging.

(e.)—EPILEPSY.

We have four cases—one (Nussbaum's) reported cured, one greatly improved (Gillett's), and two (Czerny and Morton) only slightly improved. In all these cases there was an aura from the region of the nerve stretched. Prof. Nocht considers these results as hopeful; and perhaps they are relatively so when we consider the intractable nature of the disease we are seeking to cure. But, as with the contractures, we must wait until a much larger number of cases can be collected, before we can decide upon the value of the operation in this affection.

(f.)—DISEASES OF THE OPTIC NERVE.

It is surprising that any one should have thought of applying the operation to this nerve, and still more surprising that he should have been bold enough to put the idea in practice. It does not seem that one would be justified in

stretching the optic nerve, even in cases which have been considered hopeless. Nevertheless, Kummel has stretched the optic nerve seven times without any bad effect. All the patients were blind. Once he observed œdema of the retina, but no hemorrhage nor any inflammation of the nerve. In some cases of atrophy there was slight benefit.

Wecker, of Madrid, reports similar investigations and negative results. We have not the details of any of these cases.

(g.)—DISEASES OF THE NERVE-CENTRES.

The value of nerve-stretching in these diseases has been very generally discussed of late, and the tenor of these discussions has done much to bring the operation into disfavor—far more than its merits in other affections should have allowed. Indeed, it was its success in these other diseases which caused its trial in the as yet incurable diseases of the spinal cord, and because an equal success has not resulted, the real value of the operation has been overlooked. We have collected 81 cases. In 14 the operation may be said to have failed; in 1 the result is not recorded; all the others (66) were benefited.

There are 57 cases of the nerve stretching for locomotor ataxia. In 16 of these the improvement was so decided and persistent that some of them have been reported in other papers as cured. We prefer to record them as "*improved*," as there are good reasons to believe that in this disease all cases operated on will, after a time, relapse. Twenty-seven received only temporary (few days to a few weeks) benefit. In 13 cases there was no improvement. In 1 case the operation seemed to be the cause of increased suffering.

These results show that 33 per cent. may be greatly benefited, that 40 per cent. may be temporarily relieved, while in 25 per cent. we must expect to see the operation fail entirely.

Dr. H. J. Boldt (New York), who furnishes six cases for this paper, concludes that in ataxia the "stretching of nerves is only to be advised for the relief of symptoms," and even then the "result is variable." He thinks it better to stretch the anterior crural than the sciatic in these cases.

Prof. Langenbeck (Berlin) attaches considerable importance to the method of operating. Stretching the sciatic in its middle or lower third is followed by less

atrophy of the limb, as the muscular branches are mainly given off above this point. He considers that cicatricial tissue, by irritating the nerve, may give rise to troublesome symptoms. He conducts his dissection with the utmost care, and avoids, if possible, the division of a single muscular fibre.

As to the propriety of the operation in locomotor ataxia, he considers that while relapses have very frequently occurred, the relief afforded fully justifies the operation; and I trust that there are none who have witnessed the extreme suffering produced by this disease, who are not prepared to accept the correctness of this conclusion.

(*h.*)—TRAUMATIC TETANUS.

Fifty cases of traumatic tetanus, treated by nerve-stretching, were followed by recovery in 10 instances. There were 37 deaths, and in 3 cases no result is reported. These figures do not encourage very sanguine expectations as to the success in nerve stretching in tetanus; but then we must remember that no other mode of treatment for this disease shows very flattering results. In many of the cases that terminated in death, the operation procured very complete relief from pain and spasm; in other cases, no such relief was obtained. It has been objected that the operation was an additional source of irritation; but we are convinced that if done early, and under an anæsthetic, it can do possible harm. On the other hand, there are strong grounds for the belief that when the lesion can be localized, and the affected nerve discovered, the operation may, in a certain proportion of cases, do immense good. Again, it is objected that the recoveries were due to other means (medicines) than the operation. While the physician will not generally dare to risk his patient's life by omitting to use any available therapeutic agent, this has been done in two instances, and the result left entirely to nerve-stretching. One of these cases recovered. We conclude, then, that it is a safe adjuvant to other treatment; and while it does not offer strong hopes of success, we can not refuse its possible benefits to the subjects of this much-dreaded disease.

Prof. Nocht reports 24 cases; 4 cured by operation alone; 2 by operation and medication; in 3 no change at all; balance, temporary relief (*St. Louis Clin. Rec.*, February, 1882). Fenger and Lee reported 21 cases, with

9 recoveries (*Am. Jour. Nervous and Mental Diseases*, April, 1881). Artaud and Gilson report 28 cases, with 7 recoveries (*Rev. de Chir.*, March, 1882). In the tables accompanying this paper there are 50 cases, with only 10 recoveries. It is a somewhat significant fact that the larger the number of cases, the smaller the *percentage* of cures. We are inclined to think, on the theory of probabilities, that the percentage of recoveries will not be any less than that recorded in this paper (20 per cent.), and may perhaps exceed that recorded by Nocht or Artaud and Gilson (25 per cent.).

DANGERS.

The *dangers* of the operation are in general the dangers of any surgical operation. Five deaths have been reported. One, however, was due to chloroform (Langenbeck). A second was due to the entrance of air into the veins (Gartner). These are not justly chargeable to the operation. I can not judge of the other cases, as the details are too meagre. Practically, there seems to be little to fear as far as life is concerned. There are other dangers, such as erysipelas, ulceration, hemorrhage, sloughing, koratitis, paralysis (not persistent), and occasionally syncope and convulsions, which it is well to remember, although they are infrequent and generally of trifling importance. It is not impossible, however, that violent and repeated stretching (Table (g) case 73) may produce shock enough to the central nervous system, already the seat of extensive organic changes, to precipitate the fatal termination, and it is proper to avoid very forcible traction in diseases of the nerve-centres.

The study of statistics leads us then to a most hearty endorsement of the operation in neuralgic and spasmodic affections, and to at least justify its use in tetanus and in some diseases of the spinal cord.

SELECTIONS.

Crossed Action of the Spinal Cord—Another Change of Base.

THE present generation of physicians have been taught to believe that, owing to a decussation of fibres at the

base of the brain, each hemisphere holds its relation to the opposite side of the body and not to its own side. But we are now required to modify our views on this subject, if not to throw them aside. According to the London *Lancet*, Dr. Brown-Sequard repudiates the old theory. The numerous researches he has undertaken during the last four years seem to him to involve conclusions exactly contrary to the opinions which are universally received. For example, against the assertion that the irritation of the motor region of the brain uniformly produces movements in the limbs on the opposite side, he opposes certain experiments of his own. These show that irritation of one side of the pons Varolii or of the medulla, even of the anterior pyramid, causes, eight or nine times out of ten, movements of the limbs on the same side, and the same effect is observed when, after a transverse division of one-half of the medulla, the superior part of the pons is stimulated, mechanically or by electricity, in the part considered as motor. Irritation of the cerebral peduncle in the part considered as motor often causes movements of the limbs on the same side. This result occurs five or six times in ten when the stimulation is applied to the upper part. If the fibres are galvanized which pass from the corona radiata or corpus striatum to the peduncle, movements are often observed on the corresponding side of the body. If these parts are divided transversely on the right side or on the left, the mechanical excitation thus produced rarely causes movement, but when it does the effect is usually manifested on the same side as the irritation. Even stimulation of the motor zone of the cortex, as Couty has shown, sometimes causes movements on the corresponding side. Moreover, Dr. Brown-Sequard has repeatedly shown that if this zone is galvanized after the lateral half of the medulla or of the pons Varolii is divided, the movements in the opposite limbs, instead of being prevented by this section, occur with still greater force than before the division of these conductors which have been believed to be alone capable of transmitting the stimulation of this zone to the limbs.

According to received doctrines, if one lateral half of the cervical cord is divided at the second pair of nerves and different parts of the brain are then stimulated, mechanically or electrically, on the same or on the opposite side to the spinal lesion, no movement should occur, or

only a very slight movement in the members on the same side as the lesion. But Dr. Brown-Sequard finds that, under these circumstances, stimulation of the brain causes energetic movements of the limbs, such as "bipedal" movements, diagonal or lateral, to the right or left, or a movement of three, or even of four limbs. He concludes from this that one-half of the cord will suffice to transmit to the limbs, on both sides of the body, the excitation caused by stimulation of the opposite half of the brain.

According to received doctrines, the transverse section of the two lateral halves of the base of the brain, the one section at a distance of one centimetre above or below the other, ought to destroy all or almost all communication between the spinal cord and the portions of the brain above the higher section, so that mechanical or chemical excitation of the cortex should cause no effect on the limbs. But Dr. Brown-Sequard asserts that under these circumstances not only does stimulation of the motor centres act energetically upon the limbs, but the same effect is produced by stimulation of the parts which are not considered to be motor, such as the optico-striate bodies. In this case, also, the effect is usually most marked on the same side as that stimulated. An analysis which Dr. Brown-Sequard has made of 500 cases of unilateral convulsions in consequence of varied lesions of the brain shows that the same is true of man as of animals. Irritation of the base of the brain and the adjacent motor regions causes convulsions more frequently on the side irritated than on the other. The superficial parts of the brain, it is true, produce chiefly crossed convulsions, but irritation in all parts *may* cause convulsions on the same side.

The conclusions drawn by Dr. Brown-Sequard are, that one of the chief foundations for the theory of psychomotor centres, and of the crossed functional relations between the hemispheres and the limbs must be considered to have lost its value; and, secondly, that the excito-motor zone of the cerebral surface, and indeed all the excitable parts of the brain, are capable of putting in action the limbs of the same side, as well as those of the opposite side, and that they may produce these effects after the transverse division of one-half of the pons Varolii, of the medulla, or of the cervical cord, and even after two sections of the base, one of the right half and the other of

the left, provided a certain interval exists between the two.—*Pacific Medical Journal*.

Supposed Death by Chloroform.

BY R. A. KINLOCH, M. D., OF CHARLESTON, S. C.

It is desirable that there should be recorded every death attributable to either of the anæsthetic agents in use, for it has hardly been settled that one of these agents should be universally employed because of its immunity from danger. In certain sections of our country and of Europe, chloroform is still the favorite article used, for its general adaptability and because in the largest experience it has proved safe as well as satisfactory. In other sections there is a strong prejudice against chloroform, and a belief that ether is entirely free from danger. I have in an experience of over thirty years, never had occasion to distrust chloroform, and have never until now seen a death attributable to its administration. From very many experiments and observations, however, I have been lead to believe that ether is less apt to be followed by nausea or by great depression of vital power. My rule of practice then, in late years, has been to employ chloroform in surgical and obstetrical practice, except in operations necessarily protracted, or where nausea and vomiting would be prejudicial to the condition of the patient. I am inclined to doubt if the death, in the case which follows, can be attributed solely to chloroform. Fright, terrible anxiety, a peculiar nervous organization, and an exalted moral sensibility, may have had much to do with the sad termination. But I prefer reporting the case and leaving it to the verdict of the profession.

Further interest attaches to it from the fact, that the secular press has circulated through the country the grossest misstatements regarding the case itself, and the conduct of the physicians connected with it. I will notice and correct only two of these. It has been falsely stated that assistants were introduced into the operating chamber of the patient against her wishes, and while she was insensible from chloroform. The truth is, the consent of the lady was freely given, because she knew that the assistants were necessary. Her only desire was that she should

be chloroformed before they were introduced. Next, it has been affirmed that the cause of death was suppressed in order to shield the physicians, and prevent a coroner's inquest. The truth is, the death (although the matter was rather doubtful) was at once assigned to the chloroform. This was announced frankly to the family of the deceased and to others. Moreover, a mortuary certificate of death from *chloroform narcosis* was handed to the City Registrar, in order to obtain a permit for burial.

THE CASE.—On the 7th of May, 1882, I was called to attend Mrs. L. R., who had long been an invalid, and been attended before by two very worthy practitioners of this city. She was aged about forty, married, a mother of two children, the last being six years old. I found her thin, anæmic, unable to exercise without much backache; never sleeping well at night; having usually prolonged and profuse menstruation—in the intervals, much leucorrhœal discharge; great bearing-down sensations, with vesical and rectal tenesmus; difficult digestion and constipation. These symptoms, in part, pertained to her since the birth of her first child, but had been more continuous and severe for several months past. There now also is complaint of severe paroxysmal cough, with the physical signs of sub-acute bronchitis on both sides of the chest. The pulmonary symptoms Mrs. R. attributed to a recent cold. She said she had sent for me chiefly to relieve her of the trouble which she had had during many years, and which made life a burden to her. She said she knew the disease to be uterine. Other physicians had treated her for this; but she was in hope that a radical operation might relieve her. There was prevailing an epidemic of whooping-cough, and the children in the house had suffered. Mrs. R. had formerly had this disease, but the character of her pulmonary symptoms led me to believe that she was to some extent suffering from the “epidemic constitution of the atmosphere.” She was anxious for a thorough examination; so, after prescribing for her cough, I appointed an early day for the purpose, and in due time discovered a left lateral fissure of the cervix, reaching to the cervico-vaginal junction; also an elongated and enlarged cervix, a prolapse of the bladder, and a prolapse and partial retroversion of the uterus. I gave as my opinion that much could be done by treatment, both local and general, but that, first of all, the cough must be relieved, and the

digestive organs improved. In time, I proposed to apply local remedies to the uterine and cervical cavities, and to close the fissure by operation. Mrs. R. was intent upon an early operation, as she said she had too long been trying palliative remedies. I could with difficulty persuade her that these radical means must for a time be postponed. After about a month's general treatment, part of which time I was absent from the city, Mrs. R. had so improved that she again renewed the question of operation, saying that her cough did not now affect her, and that she wanted to be attended to before leaving the city for a summer's vacation. While regarding her as a rather bad subject for an operation, I, nevertheless, thought the cervical fissure could be closed without risk, and that, by the use of a pessary, she could be enabled to go comfortably into the country.

June 19th was appointed for the operation. Mrs. R. had always been exceedingly sensitive as to the matter of personal exposure, and I readily consented to give the chloroform only in the presence of female attendants. When the request was made for the patient to get upon the table, she became much excited, and could scarcely be comforted and assured. She shrank back as one having a feeling of impending danger. I subsequently learned that she had had a presentiment of death, and went so far as to write out requests she wished fulfilled after death. I mention these facts to illustrate the nervous condition of the subject, as with many it may be considered as having something to do with her sad end. The chloroform was given upon a towel folded funnel-fashion. The towel was at first held a little distance from the face, until the patient grew accustomed to the vapor and was habituated to the proper inhalation. The usual period of excitement came on, with some struggling of the arms and rolling of the body. One of the female attendants helped to control these movements, and in a short time relaxation began to be evident, with the slightest stertor of breathing. Less than three drachms of chloroform had been used. I at once suspended the chloroform, passed the towel over to the nurse, who was at the bedside, and a little removed, and asked her to hold it where she was. I felt no apprehension about the patient, and moved to the door separating the chamber from the parlor, and called to Drs. Simons and Pelzer, my assistants, to enter.

I now took my position at the foot of the table, while my assistants remained at the side, and began to put the patient into the semi-prone and lateral position for operation. I little thought that during the few seconds of absence the cumulative effects of the drug would be exhibited. Glancing at the face of the patient, I suddenly discovered that it was cyanosed, and the eyes staring and fixed. I called to Dr. Simons to notice if the breathing was right, and almost simultaneously we both advanced to the patient's head. I saw that the respiration was embarrassed, and heard a gurgling noise coming from the presence of mucous secretions in the bronchii. Dr. Simons raised the head of the patient, and turned the body partly over into the supine position. I threw up the windows, dashed cold water upon the face and chest, slapped the surface smartly, depressed the head, while the body and lower extremities were raised, injected brandy, and subsequently liquor ammonia and brandy, subcutaneously. Towels were wrung out of very hot water and applied over cardiac region. Used galvanic battery as soon as this could be secured. Finally, noticing that the respiratory movements were now entirely arrested, also the action of the heart, while the veins of the neck were greatly distended, I opened, first, a vein at the bend of the arm, and afterwards the right external jugular, hoping that, by removing some of the dark blood from the cavities of the heart, this organ would have a better chance for contracting. All to no purpose—the heart remained paralyzed, and we had soon to realize the fearful fact that death had supervened.

Uterine Hemostatics.

BY J. BRAXTON HICKS, M. D., F. R. S., Guy's Hospital, London.

As a small contribution to the practical portion of the subject of uterine hemostatics, I venture to make a few remarks on the mechanical kinds, which we know by the name of plugs or tents. In doing so I must be understood to refer only to those cases where the cavity of the uterus is not sufficiently large to contain blood in quantity, the loss of which from the circulation is likely to produce anything of serious detriment.

If we go back to former practice and to text-books, we find it recommended that in case of threatened abortion with much hæmorrhage, a vaginal plug should be used. The vaginal plugs recommended are the tampon, cotton or wool, silk or cambric handkerchief, rags or sponges passed in till the vagina is filled up. An India-rubber ball also has been suggested, covered with felt or such like material. Now, even with the best management, there is much of distress to the patient in the use of the vaginal plug; and with regard to its hemostatic effect very much uncertainty, and generally partial failure; and in the hands of the unskillful and careless there is positively no restraint of bleeding worth the mention. If at any time any good results be produced, it is rather by the reflex irritation that it causes, whereby the uterus expels its contents. It is not so very rare an occurrence that one finds, on removal of the plug, the ovum on the uppermost part of it. But besides its palpable inefficiency, a vaginal plug, being of a porous texture, absorbs a large quantity of blood and thus conceals it from our sight; it also favors decomposition, and this, as is well known, occurs within a few hours; and thus we have a new element of danger.

Again, in many cases, when called to such a case, we have no speculum at hand; and although we may extemporize one out of card-board, book-covers, or such like material, yet, before we have thoroughly and firmly filled the vagina we must have given the patient considerable pain and distress, besides having occasion to put such pressure on the urethra as may necessitate subsequent catheterism. For these reasons, namely, the imperfection of action, pain in introduction, and danger if left in long—in other words, its general crudity, it seems to me that as a general rule the vaginal plug should, in the cases I have supposed, be discarded. And as a substitute I would urge the employment of the cervical plug as being more precise in action, as well as being capable, if we use a dilating kind, of expanding the canal for the purpose of exploration, or for the expulsion or removal of its contents.

If, then, in any case of uterine hæmorrhage where we have the conditions above alluded to, we desire, besides immediately checking the bleeding, to dilate, we can use the compressed sponge-tent; the best form of which I have found to be those made after Sir James Simpson's plan, by Duncan, Flockhart & Co., Edinburgh. These can be

introduced by a long pair of forceps, and retained *in situ* by placing a piece of sponge, with tape attached, in the upper vagina. Of course, even these materials retain some secretions, etc., and tend to facilitate decomposition; but their removal and cleansing can be effected much more readily than the vaginal plug, because it requires but a small portion. The sea-tangle tent, by reason of its slipperiness, is unreliable as a plug in hæmorrhage. If we desire, however, only to plug the cervix, we can very easily extemporize a plug from materials to be found in every house. For instance, take a stick (say a flower stick) about a foot long, and taper it at one end to about the size of an uterine sound, or larger; wind round this end, for about three inches down, strips of cambric rag, lint or sponge to the required thickness, judging from the size of the os. Strips of sponge can be readily obtained from the cup-shaped sponges of compact texture, and they can be tied on by thread, layer after layer, till the requisite conical form is obtained. The strips of the other material can be laid on similarly. After the covered end has been well greased it is passed into the canal and the stick retained *in situ*, after the manner in which we tie in a catheter; an elastic tape, if obtainable, is to be preferred.

A catheter or bougie, or the end of a long injection-tube, can be treated in the same way. If we require great precision of application, then it is best that the hand should hold the external end till the hæmorrhage has ceased. If the catheter and stilet be used, then I have found it convenient to bend the external portion backward, between the buttocks, tying the tape around the ring of the stilet—the ends of the tape being carried, as usual, to back and front of the waist-band.

These more homely adaptations I have recommended, rather than the especially made kinds, because they are often wanted at times when we can not send home for a showy sort. In any case, a cervical plug, expanding or not, is more precise, less crude and painful in application, than the vaginal, and, in my experience, nearly always successful. In all cases of abortion, where a plug is necessary, I would lay it down as a rule that the expanding tent should be employed. In cases of flexion with abortion (and it is this complication which so frequently increases the hæmorrhage) it will be found that the covered stick

or stemmed plug, above described, is very useful; for, if the fundus be elevated during its introduction, the uterine cavity is straightened and evacuation of the contents thereby facilitated.—*British Medical Journal*.

On the Treatment of Convulsions in Children.

EUSTACE SMITH, M. D., F. R. C. P., *London Lancet*, gives the following:

When called to a case of convulsions the practitioner should lose no time in questioning the attendants, but should have the child placed in a warm bath of the temperature of 90° F., and apply sponges dipped in cold water to his head. This is the time-honored remedy. It is certainly an innocent one; it may tend to quiet the nervous system; and it is one the efficacy of which is so generally recognized among the public that it would be unwise to court unfavorable criticism by neglecting to employ it. The bath must not be continued too long. In ordinary cases the child should be allowed to remain in it for ten or fifteen minutes, according to his age. If, however, the patient be an infant who has lately been reduced by an exhausting diarrhea he should not be allowed to remain more than two or three minutes in the hot water, and cold applications to the head must be dispensed with. If the convulsions have ceased when the case is first seen the bath need not be used; but we should not omit to have the child completely undressed, and then to see that he is placed, lightly covered, in a large cot, and that the room in which he lies is well ventilated and not too light. Care should be taken to unload the bowels by a large enema of soap and water, and if the child be noticed to retch, his stomach may be relieved by a teaspoonful of ipecacuanha wine. In the case of a teething infant, opinions differ as to the propriety of lancing the gums. There is no doubt that this operation is a useless one if employed with any hope of hastening the eruption of the teeth; but if the object be to relieve pain and tension I consider the practice judicious, and never hesitate in such circumstances to have recourse to it. If it be desirable to remove all sources of irritation, surely such a source of irritation as a swollen and inflamed gum should not be disregarded. Lastly, if it can be discovered that

the child has had pain in the ear, or if the tympanic membrane can be seen to be red, the ear should be syringed out and fomented with hot water, and, if thought desirable, a leech may be applied within the concha, the meatus being first plugged with cotton wool.

If in spite of these measures the convulsions return, or signs are noticed of continued irritability of the nervous system, it is best to administer a dose of chloral. Two or three grains can be given to a child between six and twelve months old; and if the patient be unable to swallow, half as much again may be administered by the rectum dissolved in a few teaspoonfuls of water. If necessary, the dose can be repeated two or three times a day. Bromide of ammonium and belladonna are also largely employed in these cases. The former can be given in three or four grain doses every two hours to a child of from six to twelve months old; the second in ten or fifteen-drop doses two or three times a day to a child of the same age. Infants are so tolerant of this drug that it should be given to them in a dose which can produce some appreciable effect. In the convulsions of whooping-cough where the spasm of the glottis is extreme, treatment by bromide of ammonium or potassium is especially indicated. The bromides are well borne by quite young children, and we should not fear ill consequences from what may appear a very large dose. Chloroform is often employed, but it is decidedly inferior to chloral and much more troublesome.

If the child has been lately the subject of exhausting discharges warmth should be employed, and stimulants, such as the brandy and egg mixture of the British Pharmacopeia, be given energetically. If the convulsive attacks are followed by signs indicative of intracranial mischief, such as stupor, squinting, ptosis, etc., the child should be kept quiet and an ice-bag be applied to his head. In all such cases the treatment must be conducted according to the condition from which the convulsion is supposed to have arisen.

When the convulsions have ceased, and signs of irritability of the nervous system are no longer to be observed, we must take steps to improve the general condition of the patient. His bowels should be attended to and his diet carefully regulated. If rickets be present it must be treated. Most children in whom the convulsive tendency exists are benefited by iron wine and cod-liver oil, for the

nutrition is usually at fault, and both the alcohol and the iron contained in the wine are beneficial, while the oil is of the utmost value in supplying nutritive deficiencies. Fresh air, too, is of the utmost importance, and the child should be warmly dressed and be taken regularly out of doors.

Hypnotism Illustrated on Animals and Human Beings.

BY L. C. GRAY, M. D.

I MUST confess to the possession of a feeling of reluctance in coming before you to-night, because of the taint of sensationalism which attaches to this subject. I am perfectly well aware that a handsome percentage of this audience will go home to-night persuaded that I have been attempting to deceive them, or that my subjects have been deceiving me.

What I do with these lower animals can be done with human beings. The same phenomena may be witnessed in both. What I do is not done by any peculiar power of my nervous system, or by any sleight of hand. Any one of you here to-night can do it. One of the most curious phenomena which I will exhibit was taught me by Mr. Egner, the bird fancier.

Here we have some tadpoles. You see how lively this one is on the palm of my hand. He squirms all over and falls on the floor, yet he can be hypnotized very easily. We hold him perfectly quiet, lifting the other hand off him easily and gently, and you see him resting quietly in the hand while I pass him around for your inspection. Now, how I do this I will tell you when I get through with the manipulations. We will put this tadpole back in the pail, where he is as lively as ever, and take a frog, which you see is also lively; and yet it is an easy thing to hypnotize him. (The frog is placed upon the top of a marble stand and quietly held for a few moments.) Now he has passed into a hypnotized condition. Some frogs are easily hypnotized; they are so susceptible to this influence that they sometimes never recover from it—they die. The other day when I was performing these experiments, a frog upon which I operated had a series of tetanic shocks, then passed into this condition, and I was unable to restore him, and within the course of half an hour he died. (He

manipulates the frog with a string, engaging it around the fore legs, etc.) You see how he permits me to manipulate him. Some of them pass so thoroughly into this condition that you can drag them all over this table. (The frog is revived and is as lively as ever).

We will next take up this little canary bird. You see how it flutters at the end of the string, and attempts to escape. We place it upon its back, clasp it firmly, and now you see how readily it has passed into the hypnotic condition. I blow upon it, and you perceive how the slightest irritation will cause it to fly away.

We have here a blue jay, a very wild bird, which can be hypnotized as thoroughly as the canary bird. It is thoroughly wild, as you see. I think we can show you how this bird can be lifted by the pen. (The bird is quickly hypnotized, and is then suspended, by the claws, upon a pen handle with the head downward and swung around). You can generally do that with a canary bird.

We have here a chicken. It can be hypnotized in the same manner. It flaps around and appears very lively. We lay it on its back on the marble, and after a little, you see, it is hypnotized. Any one of you can do that, and it will lie there for—I don't know how long—probably fifteen or twenty minutes.

Almost all the lower animals can be put into this condition; and I regret that I am not able to show it to you upon more.

There are several young men present who have kindly consented to allow me to operate on them. I will therefore attempt to show you how this hypnotic influence operates upon human beings. If Mr. — and Mr. — will kindly step forward, we will begin with Mr. —. We will endeavor to do this in the simplest manner possible, so as to show you that there is nothing mysterious about it. He simply takes a five cent nickel in his hand and gazes steadily upon it for a few moments. Then we bend his head forward quite forcibly, press his eyelids gently and firmly down and you notice he is in a hypnotic condition. (He was then instructed to rise and go down the steps of the rostrum. Being supported by Dr. Gray, the subject stumbled down the steps and stood upon the floor of the hall—eyes closed. He was directed to run and catch a ferry boat, whereupon he made desperate efforts to do so. He also went through the motions of rowing a

boat, and at the word of command, got down upon his knees, in the position of prayer, then stood up and was aroused. Dr. Gray next said to him: "You can not open your eyes." Desperate efforts were made to open his eyes, but without avail. The same may be said with the power to close and open the hands. Mr. — was then released from the bonds, and Mr. — was requested to come forward. Dr. Gray explained that he had promised not to keep the subject long in the hypnotic state, as some difficulty had been experienced a few days before in the college. He fell upon the floor at that time, comatose, and was sick for several hours afterwards, vomiting freely. He would not attempt to do more than to show how stupid he was. A piece of paper was then placed in the hands of Mr. — upon which he gazed intently for several moments, at the end of which time the doctor made the proper manipulations and the hypnotic condition was complete. The only point brought out was, as stated above, the weary, heavy, stupid condition, after which he was aroused, and the experimental portion of the lecture was brought to a close).

And now, continued the speaker, it was not for the purpose of showing you anything remarkable that I came here to night, and I may say concerning to-night's exhibition that relatively I attach the least importance to the phenomena seen in these men, and in human beings generally, because in these cases I frankly admit that I have not the slightest means of detecting or of disproving the fact that they can deceive me. A celebrated Frenchman acknowledged that after eighteen years of experimentation upon one subject, he had been grossly and steadily deceived by her, so that with human beings there is hardly any way to detect fraud. But in the case of the lower animals, there can be no fraud or deception. The phenomena are genuine—they can not simulate as human beings can—and yet we witness phenomena in these lower animals similar to those seen in human beings.

The cause of these phenomena are due, of course, to some changes in the nervous system. What these nervous changes are we do not know. We call it mesmerism, which is a misnomer, as Mesmer appeared after the phenomena had been known to others. A better name would be "hypnotism," a condition analogous to sleep. A German writer, Preyer, has suggested the name cataplexy,

meaning thereby fright. But this is not fright. You can chase any of these animals around and around and they won't pass into that condition; but grasp them suddenly in your hand firmly, so as to overcome all resistance, then open your hand slowly so that they will not perceive it, withdrawing all restraining force, and they will lie in this quiescent state. In the case of the canary bird, we are able to overcome all resistance easily and it passes into this condition very quickly; if there is much struggling or resistance more time will be required. The thing is so simple that, as I have several times already said, anybody can do it.

Now we have no possible means of knowing what all this really means, and so far as its practical importance is concerned, it really amounts to nothing. The phenomena are ranked among what the Germans call in their learned way, *rara et curiosa*—"rare and curious." I think it was Faraday, who, when asked what was the use of a certain thing under discussion, answered by asking another question, "What was the use of a baby?" You can never tell what will be the use of many things, in science, until they have grown up. Braid, of Manchester, claimed that he could do very many things for his patients by putting them in this condition, as inducing sleep, relieving pain, etc. The phenomena are being very thoroughly and systematically studied by Charcot and others in France, and are being taken up also by German scientists, who are experimenting upon members of their own family, and the outcome of all this work, I think, must be something practical.

It is impossible to give you any exact idea of the changes in the nervous system incident to this condition. We can only theorize upon it. We know in the first place that it is a condition of quiescence of certain parts of the nervous system, and an abnormal condition of activity of certain other parts. If you will apply for a moment the doctrine of localization of the nervous system, that one function of the mind is subserved by a certain part of the brain, and another function by another portion of the brain, etc., you can consider this theory with more intelligence. For instance, let us talk of localization very grossly, and assume that this tumbler contains the will, and this book represents the rest of the mind; you can conceive of this portion of the mind, the tumbler, being

in a quiescent state, while this portion represented by the book may be in an abnormally active condition, so that in the first case (that of Mr. —) you can conceive that the voluntary function of his mind, the will, is in abeyance, but the rest of his mind is in a peculiarly abnormal activity and responds to my will instead of his own.

It is not the activity of my will acting directly upon his in spite of his will. I put him in this condition by fixing his gaze for a few moments upon the five-cent piece. Others may gaze upon other substances. In the case of Mr. — I used simply a piece of paper. Others may be hypnotized by simply pressing the eyelids down; and when that condition is induced, the subject will obey the direction of my mind. But if I were to go into the next room and he was not to know that I was in the next room, I could not put him into that condition without his volition.

It is very difficult to explain satisfactorily what these phenomena mean. In physiology we know several well ascertained facts bearing upon this subject. You can cut off the head of a frog, make a section across its spinal cord half-way up the back, and in the course of a day or two you will observe strongly tremulous movements in the hind legs. If you lay bare the crural nerve in the frog and lift it upon a string, these muscular movements will cease. Just so long as you lift the crural nerve on the string, just so long will the muscular movements remain in abeyance. That shows that there are certain influences that can quiet certain nervous centres. We know that the pneumogastric nerve exercises such a quieting influence upon the cardiac ganglia, and that where it is severed, these cardiac ganglia being left to their own activity, go plunging on, in the wildest manner. There are a great many instances of one portion of the nervous system restraining another. So in the case before us. By making a man gaze fixedly upon a certain object, or holding an animal in the hand and quickly and firmly overcoming its resistance, then letting it go carefully, just as we do with the crural nerve, we can cause a quiescent condition of the central nervous system, then subsequently to that you see all these curious phenomena. That is about as near as we can get to it.

In regard to these two subjects, as far as I am concerned,

I have not the slightest doubt of their good faith; but the great difficulty is, and has been all through researches of this kind which have been prosecuted in this country, that they have been so tainted with sensationalism—that there has been so much seeming mysticism about them—that the subject has obtained a bad name, just as electricity has obtained a bad name because of the vagaries of the men who have overpraised it. Finally, if in these disjointed remarks I have led you to believe that there is some philosophy or physiological basis for these phenomena, I have done what I proposed to you I would do.

A Case of Cerebro-Spinal Syphilis.

At a recent meeting of the Clinical Society of London, Dr. Althaus read a paper on a case of cerebro-spinal syphilis. The patient, a healthy young man, suffered eight years after an infecting sore, from severe headaches, which continued for six months, and were followed by an attack of aphasia and right hemiplegia, after which they ceased. He recovered his language, but the paralysis remained, and was followed six months later by paralysis of the left leg and the bladder and bowels. There was rigidity in the paralyzed limbs, and an enormous increase of tendon reflexes, so that the slightest irritation, such as a sudden noise, opening the door, etc., caused the legs to shake fearfully, exhibiting the condition of spinal epilepsy. The center of these movements was in the patellar tendon, but percussion of any point of the tibia and the rectus femoris led to similar, although less violent phenomena; ankle-clonus was likewise marked, and the faradic and galvanic excitability of the nerves and muscles appeared to be increased. In the right arm powerful tendon reflexes could be elicited by gently striking the metacarpal bones, the capitulum ulnæ and the styloid process of the radius, the olecranon ulnæ, and the humerus. The abdominal and cremasteric reflexes were also increased; the muscles of the body were paretic. The urine, which had to be drawn off by the catheter, was healthy, except that there was occasionally an excess of lithates. The sexual power and desire were in abeyance. Dr. Althaus considered the exceedingly violent headache from which the patient had suffered not owing to a gummatous deposit, to which it is

generally ascribed, but to syphilitic endoarteritis; this was going on all the time the headache lasted, and ultimately led to thrombosis of the left middle cerebral artery and softening of brain-tissue. When the artery was completely blocked the headache ceased, never to return. With regard to localization, he argued that it was not the main branch of the Sylvian artery which had become blocked, but its cortical system, more particularly the anterior and posterior parietal arteries; and that the affection was therefore not one of the corpus striatum, but of the central convolutions bordering the fissure of Rolando. His chief reason for this was that the aphasia had been quite temporary, and that in plugging of the main branch of the middle cerebral, loss of language is generally permanent. He thought the paralysis of the left leg and of the bladder and bowels, which came on six months after the first attack, not to be owing to fresh arterial thrombosis in the right cerebral hemisphere, but to secondary sclerosis of the pyramidal strand spreading from the right side through the anterior commissure to the left side of the lumbar enlargement of the cord, where it involved, not only the pyramidal strand, but also the paths for the conduction of motor impulses to the bowels, bladder, and sexual organs.—*Medical Times and Gazette*.

Coffinism.

A FATAL case of poisoning by *lobelia inflata* is recorded in the *British Medical Journal* of July 1st. The patient was a man of intemperate habits in drink and an enormous eater. He had for some months been suffering with heart disease, and often complained of a severe burning pain in his stomach. In this condition he fell into the hands of the "Coffinites," and on the day of his death had taken an emetic consisting of lobelia and cayenne, which failed to produce emesis and induced a state of intoxication from which he died. A post-mortem was made twelve hours after death, when the pupils were found slightly dilated, the lower jaw firmly fixed and the abdomen greatly distended. A further examination revealed the intestines much congested in places, and an aperture as large as a goose-quill in the lesser curvature of the stomach, through which about two pints of fluid of a milky

appearance had probably escaped into the peritoneal cavity. In the cavity of the stomach was found half a pint of yeasty fluid, in which lobelia-seeds and pieces of cayenne were to be seen. The lungs were healthy, but the heart was fatty.

A coroner's jury returned a verdict of death from perforation of the stomach induced by the action of an emetic containing lobelia, which the deceased had injudiciously taken.

The Coffinites, who take their name (a very suggestive one in the light of the above case) from one Dr. Coffin, seem to be near relatives of the Thompsonians, once well known in this country. Their creed is rudimentary and their therapeutics simple. Acting upon the dictum that "heat is life," and that "the want of heat was disease and death," they give lobelia and cayenne in all cases coming under their care, regardless of the condition of the patient. They confidently assert that lobelia can not kill, but it has been shown over and over again that when the drug fails to be rejected by the stomach it acts as a powerful irritant and depressant, and kills with the greatest certainty.

While cases such as the above may not teach the physicians anything new regarding this powerful and dangerous drug, they may serve him a useful purpose for reference in warning the laity against its popular use. Lobelia not many years ago was as much the sheet anchor of those who practiced the Thompsonian method of treating disease as was ever aconite in the hands of the homeopaths, with this count in favor of the latter, that it was given in doses too minute to injure the patient, while lobelia in strong decoction was poured down the throat of the sick man *ad libitum*, bringing away from his stomach every thing it contained down to the basement membrane, and leaving him in a state of prostration which none but the victims of this drug or of the first overdose of tobacco could appreciate.

The lineal descendants of Thompson, our brothers the modern eclectics, have drifted away from this mooring; at least we rarely observe any allusion to the abomination in the eclectic journals; but still among the books on domestic medicine in many families may be found a treatise by some disciple of Thompson, with a large engraving of the lobelia for a frontispiece, the pages follow-

ing being devoted largely to laudation of the drug, with directions for its employment in heroic doses in almost every affection described. Besides these, there is in every town, especially in the Northern States, a traditional follower of the Thompsonian school in the person of some benevolent old lady who always keeps a bunch of lobelia hanging in her garret, and who administers it to her family or her neighbors, when any of them are taken sick, as a preliminary measure, or by way of diversion before the doctor arrives.

The physician who is plagued by this phase of domestic practice can do much for suffering humanity, and materially reduce the popularity of this barbarous plant, by always having in his medicine case an antidote for lobelia, and at his tongue's end a long list of the deaths it has caused.—*Louisville News*.

Epidemic Cerebro-Spinal Meningitis.

THE seventeen cases which Jaffe relates (*Deut. Arch. f. klin. Med.*), and which were mostly observed by himself, are not recorded for the purpose of setting up new theories concerning cerebro-spinal meningitis, but are intended to correct many errors which exist in regard to etiology, etc. He, therefore, first gives a summary of cases of like nature and of the results of all observations. The author maintains that the meningitic virus is a specific one, and considers it a waste of time to endeavor to prove its connection with other infectious diseases. It is certain that the disease in question is a specific infectious one, which may occur sporadically as well as epidemically, and may be spread by contagious as well as by miasmatic influence. As we are not yet clear as to the nature of the virus, we must, for the present, consider the two questions, as to the origin of the virus and the etiology of the disease, as unanswered; but, as a fact, we can record that it exists, and, as probable, we may assume that it is less a miasma than a contagium. Whether it be fixed or volatile, whether "vivum" or otherwise, or if parasitic, we know not as yet. Jaffe has examined, microscopically, the blood and exudations found in the cerebro-spinal cavities, but has found no organisms of any kind. He feels himself justified, therefore, in denying that cerebro-spinal

meningitis is a parasitic disease (from a modern point of view).

Prodromal symptoms were found in ten cases. Headache occurred in fourteen, vomiting in fourteen, and delirium in ten cases; the latter two were of a maniacal character, and had been admitted as suffering from delirium tremens. Episthotonos occurred sixteen times; hyperesthesia, eight; anesthesia, once only: ocular changes, ten times; aural troubles, once, in the form of purulent otitis media, with perforation of the membrana tympani. In two pneumonia, in one bronchitis, and in one gangrene of the lungs occurred. There were two cases of ulcerative endocarditis, complicated once with purulent pericarditis. Splenic swelling was observed thrice, passive albuminuria once, arthritic affections five times.

The duration was two or three days as the minimum, four months as the maximum. Ten cases ended in death, seven in recovery; the mortality being 58 per cent. The diagnosis is most difficult in the early days of the sporadic cases. We have to distinguish between the diseases idiopathic (traumatic) spinal or cerebro-spinal meningitis, tubercular meningitis, as two of the reported cases show. Typhoid fever is recognized by the gastric symptoms, which soon appear, and the absence of spinal symptoms, as well as the presence of the splenic tumor; intermittent fever by the beneficial effect of quinine. The other diseases are distinguishable in their further progress.

The treatment consisted in the application of ice to the spine and administration of narcotics, calomel in large doses, lukewarm and cold baths. The author found abstraction of blood, prolonged baths, and the administration of antipyretics to be useless, the latter disturbing the digestive faculties and lowering the patients.—*London Med. Record.*

On the Diagnosis of Trichinosis in Man.

PROBABLY a majority of isolated cases of trichinosis are never diagnosed, and even epidemics have passed unnoted, through ignorance of the symptoms caused by the parasite. In a recent lecture delivered at the Hotel Dieu, Paris, by Prof. Germain See, reported in the *Med. Press*

and *Circular*, we find an able presentation of the symptoms of the malady, under the following heads:

1. *Gastro-Intestinal Form*. Trichinous individuals are taken, without apparent cause, with serious digestive derangements; epigastric *malaise* with a sense of fullness; nausea; vomiting. The time of vomiting is variable; sometimes it takes place on the same day that food was taken, or the day after, or three or four days. These gastric troubles are often attended by diarrhœa of a choleraic type. The physician may treat the case as one of simple indigestion, or may believe it choleraic. The microscope will remove all doubt. The parasite will be found in the dejections. There are two points worth noting in this form—there is excessive perspiration and extreme muscular prostration.

2. *Rheumatoid Form*. In this type muscular pains predominate. Patients experience great fatigue, accompanied by violent pains which prevent movement. There is a sort of weakness, painful paresis. About the eighth day the muscles become swollen and hard as a plank, very sensitive to pressure. If the trichinæ have invaded arms and legs, test the muscles, the flexors are always more seriously affected than the others. Palpation gives a feeling of hardness, but the muscles of the limbs are not the only ones attacked. The trichinæ may fix themselves in the muscles of the jaw, pharynx, larynx, and eye. The muscles of respiration, especially the diaphragm, are always attacked. Dyspnœa may be observed, but this will vary according to the number of parasites fixed in the muscles of respiration. Pain is a leading symptom, and this pain may be put down to rheumatism, syphilis, neuralgia, etc. The physician will, however, be on his guard if gastro-intestinal trouble has been previously noted. The muscles may be pierced by the trocar of Duchenne or the harpoon of Modells, and the trichinæ sought for in the fragments removed. This is not a certain test, for you may take away a fragment of muscle perfectly healthy, which may be alongside a completely trichinized fasciculus. It is better to make a retrospective inquiry as to what the patient has eaten.

3. *Edematous Form*. This is the most characteristic type. Patients come to you with their faces swollen, especially their eyelids, complaining of extreme prostration. This edema may be unilateral when it is, so to say,

pathognomic, or it is dual. Not finding anything the matter with the heart or the kidneys, cachexia is expected. When joined to these symptoms we have muscular weakness and gastro-intestinal disturbance, the diagnosis is simplified. This edema may become general or give place to edema of the extremities. This is explained by disturbance of the circulation by obliteration of the small vessels by the trichinæ.

4. *Typhoid Form.* This form of trichinosis presents more than one analogy with typhoid fever. The temperature is raised and the fever continued. The aspect, prostration, respiratory trouble recall the onset of typhoid. The acute pain may be put down to spinal derangement. These phenomena will assist you: (a) The profuse perspiration which does not exist in typhoid fever, where the skin is excessively dry; (b) the edema of the face, observed in nine cases out of ten in trichinosis; (c) the rapid subsidence of the fever. I might make a fifth class under the name *nervous*. M. Le Roy de Mericourt believes that there is a certain analogy between these symptoms and those of acrodynia, which prevailed in Paris in 1829, and which may be attributed to poisoning by trichinæ. I might speak of the various furuncular, miliary, pustulous eruptions which have been noticed in a certain number of cases.

Resume. The four forms of the malady which I have just described may combine, though intestinal disturbance may be absent; yet the muscular pain, the intestinal disturbance, and the swelling of the face will almost constantly be found. The typhoid form is usually seen in those cases which terminate fatally, death taking place from the twelfth to the thirteenth week, with stupor, delirium, and all the phenomena of adynamia. This short sketch will put practitioners on their guard against error, and facilitate the diagnosis of trichinosis.—*Louisville Medical News.*

Diagnosis and Treatment of Tumors of the Bladder.

THE case of successful removal of a tumor of the bladder reported by Sir Henry Thompson at the last meeting of the Royal Medical and Chirurgical Society will no doubt awaken fresh interest in this important subject. We will not here repeat the many points dwelt on in the subse-

quent discussion, but would refer to two only—the difficulty of diagnosis, and the safety of Sir Henry's operation. All the speakers touched upon the former, none questioned the latter. From the discussion and records of cases it seems evident that while there are few removable bladder tumors, and many unremovable ones, which can be reasonably diagnosed to be such during life, there is a large number of cases in which, with only his present means, the surgeon must remain in doubt. All that is wanted in this case is to be able to *feel* the tumors. In the female, where the finger can be easily passed through the urethra, and the whole interior of the bladder explored, the diagnosis of these tumors can, we presume, always be made. Sir Henry Thompson will have done great service with his paper if it helps to draw attention to the ease and safety with which the male bladder can be thoroughly explored through a wound from the perineum into the membranous portion of the urethra. Such a wound does not interfere injuriously with the neck of the bladder, is easily made with precision, and heals readily. Every part of the viscus can be explored through it, without violence or risk, and medium sized tumors, at any rate, can be removed through it. Whether the median incision into the urethra be the best for removal of tumors in all cases we are not now anxious to show: its superiority over others for purposes of diagnosis we venture to think none would question, and we would recommend that in any case where a tumor of the bladder is reasonably suspected, and where other means of examination have not demonstrated that it is unsuitable for removal, the bladder should be explored by this safe and efficient means.—*Lancet*.

TREATMENT OF TYMPANITIS.—Tympatitis is a complication of typhoid fever and enteritis, which merits to be treated with care. The late Maurice Reynaud prescribed with great success the following: Nux vomica in powder, six grains; anise-seed in powder, three grains. Mix and divide in two powders, one to be taken in the morning, the other in the evening. M. Reynaud also ordered two tablespoonfuls of powdered charcoal in the course of the day.—*Med. Press and Circular*.

GLEANINGS.

ANTISEPTICS IN PHTHISIS.—Dr. William Porter, Physician to Throat and Lung Department, St. Luke's Hospital, St. Louis, thus summarizes:

Proven, it seems to me, are these two propositions:

1st. Phthisis is a specific disease, from a specific cause.

2d. Phthisis may be produced by absorption of tuberculous matter in contact with the mucous membrane of the air passages or intestinal tract.

There is also evidence that the energy of this tuberculous matter is due to germ development and progression.

Hence the value of antiseptic influence in the treatment of phthisis, not only in the later stages during pus production and absorption, but also in the earlier process of infection.

One great demand is for that, which by local and internal use, may meet and destroy the septic agencies of disease. Such a remedy must be effective, unirritating and non-poisonous, susceptible of ready dilution and easy absorption, and withal inoffensive in odor and taste.

Carbolic acid and iodoform do not fully meet these requirements, and less harmful yet no less potent means of antagonizing contagion and putrefaction are finding favor.

The compound known as Listerine has for nearly two years served me better than any other remedy of its class, and, in the treatment of phthisis, has almost supplanted in my practice all other antiseptics. In treatment of diseases of the upper air passages it is pleasant and does not irritate; in the fermentative dyspepsia so often accompanying phthisis it is safe and efficient.

It is the most powerful non-toxic antiseptic I have yet found.—*Lancet and Clinic*, Sept. 9, 1882.

LAUDANUM TO INFANTS.—A fatal case of poisoning of an infant is reported from Keyworth, England, and is remarkable for the alleged smallness of the dose. A "drop" of laudanum was administered one afternoon with castor oil, to an infant, three weeks old, for the cure of diarrhoea, to which the child had been subject from its birth. Shortly after, the child became suddenly very ill. At half-past five on the same afternoon it was seen by a physician, when the child was lying with contracted pupils, livid lips, skin covered with perspiration, small pulse, and slow

respiration. It could be roused with difficulty, and speedily relapsed into its former state. Notwithstanding the administration of emetics, and the use of cold affusions, the child died thirteen hours after it was first seen. Death from one drop of laudanum has occurred before, but the repetition of an ascertained case of death after such a dose is worthy of record, if only to impress on the public and the profession the danger attending the administration of opium in any form to young children.

ANTISEPTIC INHALATIONS IN THE TREATMENT OF LUNG CAVITIES.—In the *Lancet*, Dr. Lawrence Humphrey reports two cases in which cavities in the lungs were treated by antiseptic inhalations, with marked benefit. Dr. Sinclair Coghill's respirator inhaler was used. The following solution was inhaled: two drachms each of the ethereal tincture of iodine and carbolic acid, one drachm of creosote and one ounce of rectified spirits. Ten drops of this solution was used in the respiratory, morning and evening. The patient soon learned to inhale by the mouth and exhale by the nose, and was able thus to employ the respirator for one hour, in the morning and evening. In these cases the tuberculizing process had not commenced, the cavities being considered due to the breaking down of pneumonic deposits.

Dr. Thorowgood, under whose care these cases occurred, says:

"My experience of all kinds of warm steaming inhalations in chronic phthisis has been most unsatisfactory; but in the introduction of this respirator inhaler we seem to have gained some real advance toward a means of checking purulent formation in lung cavities. The creosote, I expect, is the most valuable agent as an inhalant, and it is always necessary to train the patient in the use of the respirator, by teaching him to inspire through the mouth and expire through the nostrils."

CURE OF HYDROPHOBIA.—At the meeting of the Academie de Medecine, held on July 11, M. Decroix read a paper entitled, *Nine Cases of Cure of Hydrophobia*, of which the following are the conclusions:

1. It has been demonstrated that hydrophobia can be cured spontaneously.
2. It has never been proved that the cures in cases

which recovered were due to the influence of drugs, and did not occur spontaneously.

3. All the methods recommended by the Committee of 1874 comprised the injection of nitrate of pilocarpine, and have rather hastened than retarded death.

4. Blunting the teeth of dogs is the best preventive of the propagation of the disease.

5. Persons and dogs suffering from hydrophobia should be left in perfect repose.—*Gaz. Med. de Paris*, July 15, 1882.

HYSTERO-LAPAROTOMY DURING PREGNANCY FROM A FALSE DIAGNOSIS.—Reimann (*Centralb. f. Gynecol.*, No. 15, 1882) reports the case of a Jewess, aged thirty-two, with a tumor which the attending physician diagnosed as ovarian. At the first examination, he thought he detected signs of pregnancy, but later could not find them. A surgeon was called to operate, and after careful examination did so, supported by two statements, first, that of the woman that she had had no connection with a man for over a year, and second, that of the assistants, who (falsely) stated that the physician had introduced a probe, and found the uterus not enlarged. The operator made a small abdominal incision, introduced two fingers, and as there were no adhesions, punctured the supposed tumor, when, to his astonishment, there was a gush of liquor amnii, and on introducing the finger, parts of the child in utero could be felt. There was no longer any doubt. The uterus was laid open, its contents removed, and the wound sewed up. The child, eight months, lived about fifteen minutes. The mother died on the third day of peritonitis. The case has been brought to trial by court, and is not yet ended.—*American Journal of Obstetrics*, September, 1882.

SUBCUTANEOUS INJECTION OF IODOFORM IN SYPHILIS.—Dr. Thomann has treated a number of cases of syphilis by subcutaneous injections of iodoform. After ten or twelve injections he has always observed a great improvement of the symptoms. The preparation is composed of six parts of iodoform in twenty of glycerine, and he injects progressively thirty to seventy-five centigrammes. He has never had an abscess to occur; the iodine is to be found in the urine in about two hours; no trace of the odor of iodoform occurs in the breath, in the sweat, or

urine. He also made use of a solution of iodoform in olive oil, but found it much more irritating.—*Bull. Gen. de Ther.*, July 15, 1882.

PROSTITUTION AS OBSERVED IN CANTON, CHINA.—At the City Foundling-House, in Canton, female infants (generally illegitimate) are sold for seven hundred cash (seventy-five cents) to any one who states that he wishes to bring the child up as a servant and in a respectable manner. This trade is carried on without the knowledge of the government directly, but merely to fill the pockets of those in charge of the institution. If a mother is too poor to support her child, and it is a female (males are never sold, as they only can worship at the tomb of their departed ancestors, and every Chinese parent wishes to leave behind him a son for this purpose), she takes it to the Foundling-House, and simply leaves it there. Owners of houses of prostitution come and select the infants which give promise of greatest beauty or best health, and buy them. They have them cared for on boats made for the purpose, so as to keep them apart from the world at large. They are well fed, and most carefully guarded from exposure to the sun, so as to secure as white a complexion as possible. Here they are trained for their future work. At the age of twelve they are put in the society of women considered accomplished in the business, and at fifteen they begin the life which is soon to become a misery. Now, should one of these girls be seen by a rich Chinaman, who wishes to add another concubine to his family, he may buy her and take her to his home, where, if she be a favorite, she is sure of kind treatment; and any children she may have rank in every way with those by his first or real wife, even to inheriting property. Those of the prostitutes who are not so fortunate are treated kindly or otherwise, in proportion to the amount of money they make for their master.—F. CARROW, M. D., *Maryland Medical Journal*.

EXTRA UTERINE PREGNANCY.—Dr. A. Hurd, of Findlay, O., reports two cases in the *Detroit Lancet*. Both patients died of septicemia and exhaustion. In the first, the patient lived 14 months after the supposed pregnancy. Bones were passed per rectum, but no post-mortem was allowed.

In the second case, the patient lived for about four

years. Fetal *debris* pass by urethra and bowels. At the autopsy it was found that the case had been one of double, or twin, ventral pregnancy. Dr. Hurd has been unable to find a similar case on record.

HERPES OF THE HANDS AS A MENSTRUAL ERUPTION.—Jonovsky and Schwing (*Centralb. f. Gynecol.*, No. 17, 1882) reports the case of a woman, unmarried, thirty years old, who had always had difficult menstruation from her fourteenth year; in 1873 had inflammation of the internal genitals, after which, to 1880, she was perfectly well except a deep-seated pain in the right side. At the end of 1880, patient came under author's treatment on account of renewed, severe difficulty of menstruation. Right-sided ovaritis was diagnosed and greatly benefited by treatment. In April, 1881, on the second day of menstruation, a skin affection began on both hands, accompanied by sharp burning and itching and slight constitutional disturbance. On the palmar surface of both hands, especially the left, the skin was red and swollen. This was limited strictly to the palmar surface and bounded by the wrist-joint, the tips of the fingers, and the middle line between palmar and dorsal surfaces. The diffuse swelling lasted one and a half to two days. On the then paler skin little vesicles appeared, as large as pin-heads, isolated, or only in parts confluent. Gradually they fill up, their contents became purulent, they dried into crusts and dropped off. The whole process, which was quite severe, lasted a month. Four menstruations passed without its recurrence. In September it came on again, much lighter, again more marked on the left hand. This lasted two weeks. At the next menstruation only the left hand was affected. For five periods it remained away, and in May of this year again appeared, and again especially on the left hand.

The eruption is a herpes. There was no herpes of any of the membranes and no neuralgia accompanied it. The authors have seen many exanthemata connected with menstruation, and especially a symmetrical erythema papulatum on the flexor surface of the upper and lower extremities, and in this connection they consider the present case of interest.—*American Journal of Obstetrics*, September, 1882.

RAGS AND INFECTIOUS DISEASES.—In a report to the Local Government Board (*British Medical Journal*, July 8),

Dr. Parsons discusses in much detail, and with considerable breadth of view, the precautions that are possible or desirable to prevent the spread of disease by rags; and on a general consideration of all the complex circumstances of the case, he arrives at the following conclusions: 1. Cases of infection by means of rags do occasionally occur, although, comparatively speaking, not very frequently. 2. Small-pox is the disease most likely to be thus conveyed. 3. All rag-workers should be vaccinated and re-vaccinated. 4. Dust should be avoided. The preliminary dusting of the rags before sorting is to be recommended, but the dust should not be allowed to contaminate the air of the workroom. 5. Certain measures of disinfection are available, among which exposure to air, fumigation with sulphurous acid, and exposure to hot air or high-pressure steam may be mentioned, each of which has its advantages and drawbacks under certain circumstances. 6. In the absence of means by which it may be known whether or not rags have been infected, the cases in which disinfection would appear specially desirable are—(a) rags from places where epidemics are known to exist; (b) rags in a filthy state; and perhaps (c) foreign rags, especially if coming within the two previous categories. 7. Under existing circumstances it is not advisable that any obligation as to disinfecting rags, other than that already imposed by Section 26 of the Public Health Act, 1875, should be imposed upon persons engaged in the rag-trade.

SUDAMINA IN TYPHOID.—M. Albert Robin has examined the liquid of sudamina in a case of typhoid fever, in which the eruption was so abundant the vesicles were confluent, and formed bullæ of considerable size, some of them being as much as a centimetre in diameter. More than three grammes of liquid were collected from them. It was transparent and colorless, but on standing, a deposit formed, consisting of whitish flocculi, and at the same time the liquid became opalescent. It had a slightly acid reaction, and a strong, unpleasant odor. The microscope showed only a number of fine globules of fat and some epidermic cells. It contained neither albumen nor sugar, and was not rendered opaque by the addition of alcohol. No uric acid could be discovered in it by the murexide test. An analysis showed that it contained a considerable

quantity of chlorides, but no trace of sulphates or phosphates; the proportion of water was 982, of solid matter 18; per 1000: the solids consisting of 14 parts of organic and 4 of inorganic substances. Hence the amount of organic material eliminated by the perspiration in typhoid must be regarded as considerable.—*Lancet*, August 26, 1882.

ERGOTINE IN TYPHOID FEVER.—The treatment of typhoid fever by the subcutaneous injection of ergotine, as recommended by Dr. Dubone, continues to be noticed in *Le Journal de Médecine et Chirurgie*. The last case described is of a young woman, three to four months pregnant, in whom the treatment was begun on the eleventh day of the disease, when there was much tympanites, diarrhœa, bronchitis, and dyspnœa, and when continuous delirium had given place to semicoma. The morning temperature was 104° F. Ten centigrammes of ergotine were injected daily for six days. The first injection was followed by a copious general papular eruption of the size of a millet seed. The temperature fell to 101.5° F., and did not again rise above 103° F. The other symptoms underwent corresponding amelioration, and the temperature became normal on the seventeenth day of the disease.

Four days after the discontinuance of the ergotine the patient aborted without any unfavorable symptoms. The fact that the abortion in this case took place so long after the omission of the ergotine, and the history of another case in which one and a half to two grammes of ergot were administered daily for two weeks to a pregnant woman without causing miscarriage, seem to confirm the harmlessness of this drug to persons who are pregnant.—*Boston Medical and Surgical Journal*, August 31, 1882.

CHOREA DUE TO ASCARIDES.—In the *Vracheb. Vedom.*, 1882, No. 4 (London *Medical Record*, July 15), is the report of Dr. Lesenevich of an interesting case of so-called sympathetic chorea (*chorea e vermibus*), in a weak, delicate boy, aged 11, with feebly-developed muscles and pale integuments, who, a month ago, began to complain of abdominal pains and occasional startings in the hands and feet. Later, there were gradually developed true choreic movements, which came in paroxysms of two or three minutes' duration about sixty times during the day. At night the boy was quiet. Each paroxysm was ushered in

by slight giddiness, and was followed by a deep sigh and feeling of fatigue. The administration of two full doses of santonin, having expelled twelve round ascarides (*ascaris lumbricoides*), at once stopped all choreic symptoms. [Another interesting instance of "worm" neurosis—Dr. Reckett's case of torticollis due to *oxyuris vermicularis*—is to be found in the London *Medical Record*, June, 1880.—*Rep.*]

EXTENSIVE PLEURAL EFFUSION, CAUSING SUDDEN DEATH.—At a recent meeting of the Dublin Pathological Society, Dr. J. W. Nune reported a case of a woman 50 years of age, who came to the hospital with the statement that she had been ill for three weeks with bronchitis. Examination revealed immobility of the right side, and dullness, extending up to within an inch and a half of the clavicle. There was much distress, with rapid breathing, and the patient was extremely ill: she was anæmic, and somewhat cyanosed. The left lung was hyperæmic, the heart slightly displaced to the left. The patient died rather suddenly during the night. The autopsy showed collapse of right lung, the pleura containing eighty ounces of serum; masses of lymph were found upon the pleural surface. The patient died from collateral congestion of the left lung, and a systole of heart due to the great obstruction.

ASTRAGALUS MOLLISSIMUS.—Among the plants destructive to cattle in the West is the *Astragalus Mollissimus*, whose physiological action has recently been studied by Dr. Isaac Ott, of Easton, Pa. He summarizes it as follows:

1. It decreases the irritability of the motor nerves.
2. Greatly affects the sensory ganglia of the central nervous system, preventing them from readily receiving impressions.
3. Has a spinal tetanic action.
4. Kills mainly by arrest of the heart.
5. Increases the salivary secretion.
6. Has a stupefying action on the brain.
7. Reduces the cardiac force and frequency.
8. Temporarily increases arterial tension, but finally decreases it.
9. Greatly dilates the pupil.—*New Remedies*, August, 1882.

A PHENOMENAL CANARY.—There is at present in the possession of Dr. J. McGrigor Croft, a canary-bird, which, besides giving utterance to delicious warblings, is also able to “talk” with a clearness and precision simply marvelous. The canary does veritably *speaking* and enunciates a number of sentences which are clearly imitative of the voice of the lady who has had care of it since its early youth. The effect, indeed, produced by the clear, sweetly-uttered sentences pronounced by the bird is almost weird at first; but the feeling of wonder thus created quickly gives rise to a sensation of exquisite pleasure, which is deepened as the little creature suddenly at the end of a sentence rushes off into an ecstasy of song.—*Dublin Press and Gazette*.

HIP-JOINT AMPUTATION.—During the past month, three cases of amputation at the right hip-joint were performed in England, with the aid of Mr. Davy’s lever for controlling hemorrhage. A case where Mr. McLaren, of Carlisle, operated, lost two ounces of blood; a second patient, under Mr. Cowell’s care, at the Westminster Hospital, lost three ounces; and the third case, where Mr. Paul Swain, of Plymouth, performed amputation with the assistance of Dr. Bampton, lost but one ounce and a half. All these patients are progressing favorably.—*British Medical Journal*.

THE EFFECT OF ALCOHOLIC DRINKS ON DIGESTION.—From a series of experiments with artificial digestive fluids, Buechner (*Deutsche Archiv fuer Klin. Med.*) finds that beer undiluted stops digestion, and if diluted retards the process; wines act in a similar manner; both beer and wine hinder digestion, even when in small quantities, and this action is increased if there is coexisting disorder of the stomach. He concludes that these agents should be given with caution or entirely withheld in cases of gastric catarrh.

NICOTINISM.—Dr. Allen McLane Hamilton, in his work on nervous diseases, says that for the person who presents decided nervous symptoms, traceable to tobacco, no better treatment can be suggested than the continuous use of a tonic containing iron, quinine, and strychnine, such, perhaps, as the following: Strychniæ sulphas, gr. j; quiniæ sulphas, ʒj; tinct. ferri chloridi, ʒv; acidi phosph.

dil., syr. limonis, aa ʒij. M. Sig.—One teaspoonful in water thrice daily.—*Weekly Drug News*.

OPERATIVE TREATMENT OF OZÆNA.—Ozæna is often due to a contraction of the nasal cavities, whereby the free passage of air and thorough washing out of the secretions are prevented. In order to overcome this, VOLKMANN removed, with a chisel, a portion of the middle turbinated bone in two young girls suffering from this affection. Great improvement resulted.—*Deutsches Med. Woch.*, August 19, 1882.

THE SUBCUTANEOUS ADMINISTRATION OF CATHARTICS.—A. Hiller has made a number of experiments, with a long list of cathartics, and concludes that the hypodermic method possesses no advantage over the internal administration of cathartics, either in the dose required, the time required or in the avoidance of disagreeable symptoms.—*Centralb. f. die Med. Wissen.*, August 19, 1882.

ALCOHOL AT MEALS.—Before quitting the subject of dining, it must be said that, after all, those who drink water with that meal probably enjoy food more than those who drink wine. They have generally better appetite and digestion, and they certainly preserve an appreciative palate longer than wine-drinkers.—*Sir Henry Thompson*.

SPIDER-WEBS IN INTERMITTENT.—Dr. Oliva finds from the history of 119 cases that cobweb in the dose of one to two grm. generally stops the second chill; that it is tasteless and lessens tendency to relapse. The web is shaken to remove dust, washed, dried in the sun and powdered. A tincture is also prepared.

COMPOSITION OF ST. JACOB'S OIL.—Dr. Squibb, in his *Ephemeris* (No. 4), says that St. Jacob's Oil appears to be a feeble and badly-made aconite liniment, and that it consists mainly of water, ether, alcohol, turpentine, and a small proportion of aconite, with red coloring-matter.

ANTAGONISM BETWEEN SYPHILIS AND VACCINIA.—In the *Gazette Hebdomadaire*, M. Polin, a public vaccinator in one of the military districts, states that in nearly every instance in which a child suffers from hereditary syphilis, vaccination will fail.

TRANSLATION.

How and Why One Becomes Tuberculous.

M. L. LAUDOUZY, HOSPITAL DE LA CHARITE.

Translated from *Progres Medical*, August 19, 1882, by D. N. Kinsman, M.D.,
Columbus, Ohio.

GENTLEMEN: In our previous conferences, all of which had for an object the study of one or more of the patients under treatment in our wards, I was compelled to limit myself to the practical point of drawing from the examination of these patients every diagnostic, prognostic and therapeutic indication which the subject under consideration allowed.

Always aside from symptomatic treatment, ordinarily palliative (for it is understood to be little else), I have endeavored to discover with you that which, carefully applied in each particular case, would conduct to a speedy and especially a sure recovery.

I have sought in the history of each patient and the termination thereof, those indications which would inspire trials of pathogenic therapeutics, a fit, good and curative treatment, for the reason that instead of simply watching the perturbations (symptoms) produced in the organism by the morbid cause, we should attempt to attack directly those processes which the morbid cause employs to disturb the organism.

I have concealed nothing from you, necessarily premature, uncertain, and deficient, in these attempts at pathogenic therapeutics.

I have told you how similar researches could never cease until we had learned not only the etiology, that is to say, the *how*, but also, and more especially, the pathogeny, that is to say, the *why* of these diseases.

In order to institute pathogenic therapeutics, in reality, presupposes that we know the mode in which the morbid cause installs itself and entrenches in the organism; that we know the processes and the means which it uses to provoke the revolt of the economy and place it at its mercy.

Moreover, to institute pathogenic treatment of a dis-

ease presupposes that we are acquainted with its why (*pourquoi*).

The proper office of prophylaxis is to suppress the determining cause, prevent the enemy from passing the frontiers; in a word, avoid the disease.

It opposes itself to the onset of the disease, which cannot be avoided, detects the tactics of the enemy, whose attack you can not escape, learns his arms, his forces, his habits, baffles all his efforts. Such are, such *ought* to be, the especial aims of pathogenic therapeutics.

Almost every day (notably among the numerous patients treated in our wards for infectious diseases), each time we employ symptomatic treatment, according to therapeutic indications, we do nothing but palliate, moderating here the diarrhœa, depressing fever there, striving at one time to dissipate congestions, at other times soothing and strengthening the patient.

I told you we were not able to help dreaming of something better than this defensive warfare; and that, better advised, more expert, better instructed, better armed, we should be able some day to assume the offensive.

I told you that, aside from that empiricism to which we owe yet the better part of our therapeutic power, we have always, in order to render our therapeutics active and curative, to await a knowledge of the nature of diseases.

It would seem that we ought to possess better notions of the etiology, better knowledge of the occasional and determining causes of each of those diseases, which we have the most commonly to treat. How far this supposition is from the reality!

What do we know, for example, that we can teach the Masters concerning the nature, or if you please, the *why*, of tuberculosis?

Of all diseases, is not tuberculosis the one which ought to interest the physician the most? since from our notions true or false, complete or incomplete, will spring necessarily our efforts, efficacious or vain, against the disease.

The doubt in which pathology leaves us touching the *why* of tuberculosis becomes a veritable torment to every physician who takes upon himself to ask, to-day, if he ought, in view of the increasing ravages of tuberculosis, to remain almost as impotent as our ancestors. Gentlemen, consider that there is no disease more common than

tuberculosis, which during the last eight months has destroyed, in the city of Paris alone, 8,222 persons (not taking into account the great number of invalids in every rank of society). Consider that there is no disease more difficult to heal and harder to cure. Consider that there is nothing which wearies out more victims, and this in all countries, among all ages, and in every social condition.

I do not wish to-day to review the history of each of the score of consumptives lying in our wards. I do not desire to review the symptoms, general and local, which each presents; nor do I wish anew to dwell upon the series of very instructive considerations, which reveal the mode of origin and course of these accidents. All these things I have told you in the wards and at the bedside of the patients.

I desire to-day, in a sort of historic and synthetic *resume* of these tuberculous patients; to-day, as physicians far from any interested ear, where we are not compelled to be reticent, to try to answer many such questions as suggest themselves to you now, and which will come to you to-morrow with greater force, associated with the difficulties, exigencies and responsibilities of practice.

I wish to try to penetrate with you the *how* and *why* of tuberculosis in each of our patients. In other words, I desire to take an inventory of that which is known, or thought to be known, concerning the etiology of tuberculosis, hoping to separate from this inventory some exact data concerning the nature of the malady.

The time for this inventory seems to me to have arrived, when all treatises on pathological anatomy, all the indications furnished by general pathology and comparative medicine, and all the beautiful researches of experimental pathology, come to illuminate with their latest contributions the unequivocal teachings of tradition and clinical medicine.

I have spoken of the researches of experimental pathology. One portion already old, and accepted after heated controversy, with which you are acquainted; the other part dating from to-day and yesterday, ought not to be ignored by us. Upon these questions we have no right to be silent, even if the results announced, peremptorily, are not accepted or rejected.

Gentlemen, we are assisting at this time, if not in a

revolution, at least in a powerful movement which seems to be preparing for the reform of phthisiology.

The honor of this vigorous movement belongs to Prof. Villemin, the first to institute the experiments with which you are familiar, and to which it is necessary now to return, when it is desired to penetrate the nature of tuberculosis.

How and why does one become tuberculous?

To the first question, How does one become tuberculous? the answer is unanimous, and the response you will find clearly given in the clinical lectures of my teacher, Prof. Peter.

Privation, indigence, causes tuberculosis, in the sense that it favors the hatching the disease; that it creates favorable conditions; that it prepares the ground, in the sense so to speak; that it makes the bed of tuberculosis.

But in order to realize, in its great fatality, the *role* of privation in the etiology of tuberculosis, we must not use the word in any narrow sense; we must remember that there are many poverty-stricken ones in the world besides those assisted at public charities. We must understand with Prof. Bouchardat, the word in its physiological sense, and recognize that there are poverty-stricken ones in the world who want the necessities of life; those who want air or bread; those who want neither air nor bread, want general well-being, want to know how to live without sadness, how to enjoy and profit from life.

Do not think those only are indigent who do not eat every day to their satisfaction. Man lives not by bread alone; for him many other things are necessary that his nutrition may be complete and entire.

Man must have air, motion, contentment, the privations of which causes that to bread profit him nothing, as the men of the world say, in a language to which physiology can make no exception. These things will explain to you why among the phthisical, who all pass from indigence to tuberculosis, all do not take the same road, and may have known very little of the experiences of the poor.

To be sure, in the greatest number of cases the nutrition has been enfeebled because alimentation has been insufficient, either absolutely, as when wages are less and food is scarce; or relatively, as when the alimentation remains normal, the expense becomes greater, proportionately, than the receipts.

It is in the first way that poor citizens become indigent, and therefore tuberculous—those for whom the bread for each day is put in question. Again, it is in the same manner that the patients in our hospitals, with epithelioma of the tongue, or stricture of the œsophagus, or especially the insane, by refusing to eat, as well as those who are alcoholized and cancerous, falling into a state of apepsia, become ill-nourished and then tuberculous. All, as M. Bouchardat has well said, die of hunger, even as the beggar who has nothing to put between his teeth.

Other patients fall into indigence, in the second manner, either because their food is not qualitatively appropriate to their organization, or because, nourished simply by the ration sufficient for repair, their young organizations (boys of eighteen years, young girls of from twenty to twenty-two years of age) are compelled to make new outlays not provided for in the ordinary budget.

These young organizations, seeking to live on the food sufficient for repair, when they have been obliged to expend the food for growth and labor, as I have already taken care to have you observe, respecting the tuberculous patient laying in bed at No. 9, *vis* at St. Charles' ward—a mason nineteen years old, of immoderate size—to the demands necessitated by a rapid growth in stature, more perhaps than by the muscular fatigue of his occupation, has been conducted to a state of physiological bankruptcy.

In the second and same manner young collegians of about eighteen years fall into misery from want of quantitative and qualitative nourishment, which, to face the thousand and one exigencies of an organism in full evolution, ought to be, more in quality than in quantity, the triple ration, for repair, work, and development.

What we have said concerning aliments, we may repeat concerning air, of which neither the quantity or quality should be abridged, under penalty of seeing misery occur and tuberculosis arise. Living in confined air, irrespirable because it has been already breathed, sometimes by one and the same person; at others, by many persons, at the same or successive times, has caused four of our patients to fall into indigence and tuberculosis.

Confined air rendered their nutritive oxidations imperfect. Neither the loft in which our patient of St. Anne (No. 9) slept ten hours of the night, nor the kitchen (con-

stantly lighted with gas) in which she passed fourteen hours of the day, contain a quantity of air adequate to the respiratory demands of a girl twenty years of age, large, muscular, and without pathological antecedents, and who, landing in Paris in full health, has become emaciated and tuberculous, the result of the miserable conditions in which she came to live.

The same thing happened to the young man of thirty-five years, who had not until within the last six months known any disease, either in himself or his parents.

The conditions are similar to those which we have already said favor phthisis in this young fellow's case. A servant in a hotel, he slept in a chamber filled by his bed and a chair. His room had no window, and received its air from a passage way which was scarcely ever ventilated. It was closed during the day, not being opened for a common passage way. Shut at night, that he might lodge there.

The same thing, and the same results, happened in the case of the young man of nineteen years, lying in No. 10 *vis* St. Charles' Ward, who had never coughed till he came to Paris; who, strong and vigorous as he was, in less than six months has become the wretched and tuberculized person whom you see. He has told you how he lived. A servant in a *café*; he never went abroad. He rose at eight o'clock in the morning; he retired to sleep at 2 A. M.; and then upon a billiard table in a corner of the establishment, in an atmosphere which you will think limited and sufficiently confined, tainted as it was with fumes of alcohol, human respiration, gas lights, and tobacco smoke.

Very sad is the history of the young patient lying in bed No. 22, St. Anne's Ward, who passed her nights in a chamber so small that there was no room except for her bed. She slept there nine hours, after passing fifteen hours in a workshop where there labored, in the midst of the dust, twelve other feather workers.

These conditions of confined air you will find to exist much more frequently than you would be led to think, and if you will look more closely, you will discover them, where an eye not accustomed to search, would not expect to find them.

There is not sufficient care taken, for confined air, and many times respired, is the atmosphere in which many

Parisians pass one-half of their existence—who pique themselves upon practical hygienics, and who, in other respects, living plentifully, have a hundred places to suspect that on the other side they touch indigence.

This is the case with great numbers of young householders, who pass nine hours at least out of twenty-four lying in chambers which the error of our architects persists in making so small that there is frequently no room for a cradle, sacrificing the space imprudently to make the dining-room and parlor, through which the family simply passes, to confine themselves and live in their sleeping-room. Rarer yet, and privileged, are those young families who do not share with an infant the air which they have respired during ten or twelve hours, and which would be at least partially renewed, unless with untimely luxury they cover the walls and render them impermeable.

See how, living without air in deplorable conditions approaching poverty and preparing themselves for tuberculosis, many of your clients who ought to be happy in the world, render themselves anæmic and debilitated, and will be vanquished in the struggle for health.

It is in this fashion that many patients, in private practice, every day predispose themselves to tuberculosis, where in your beginnings, you will be liable to overlook the etiologic *role* of indigence. Besides those patients, poor or rich, who end in becoming tuberculous because their supply of air has been scanty, there are others who become tuberculous because they are not able to breathe sufficiently, such as patients suffering from stricture of the œsophagus, or the cancerous apeptics, who constantly tell us they are unable to eat the aliments offered them.

I have alluded to the unfortunates attacked with stenosis of the trachea and pulmonary artery, who, thrown into suffering from want of air, fall into the power of tuberculosis. Mark the patient in St. Charles' Ward, whom some of you saw in the service two years ago, and whose history I published with my master and friend M. Dagnet. Again, it is by indigence (indigence relative this time, the individual ruining himself, as the rich who think there is no necessity for them to count the cost) that all those become tuberculous, who, by all sorts of excesses, by incessant and inconsiderate expenditure of force, rush into bankruptcy.

It is thus that those young men, who, upon the faith of their twenty years, waste their nights, and by the work which they are compelled to do simultaneously with pleasures and venereal excesses, so frequently become tuberculous.

Numbers of individuals end in tuberculosis always by the same road, who, although not indigent, are not less in a state of physiological misery, since they do not profit by life.

Witness the rich, debilitated by want of exercise; witness those young girls and surfeited young women whom nothing amuses, nothing more diverts; observe the beautiful indolent Oreoles of Martinique, of whom M. Bouchardat so often speaks; observe, again, those victims of life worn away by melancholy emotions, by envy and disappointed ambition; all those unhappily married young women, for whom existence is but a long tissue of regrets, of distastes, disgusts, lassitude and grief.

To want of exercise, melancholy passions, mean jealousies, deceiving inactivity, to solitude, to the privation of that influence of which each man is the radiant center, to lassitude, we should attribute the prevalence of tuberculosis in harems and convents.

It is proven that the convents in which a contemplative life is led, the Carmelites, for example, pay a heavier tribute to tuberculosis than the Hospitales, and this in spite of the fatigues and exposure to contagion imposed upon these monks. In this order of ideas, the remark of Laennec is very striking—that in a convent of nuns haunted by tuberculosis, there were among these victims of the insalubrious conditions of cloister life, some who always escaped.

These were the attendants of the revolving box, for their necessary communication with the external world removed them from the dangers of monastic rule.

The part due to depressing emotions, daily want of hygiene, excess of work, venereal excess, rapid growth, irrational alimentation, is greater than you would be at first led to suspect.

It is in this manner in which, contrary to all appearance, the rich touch upon indigence. Thus you will understand why tuberculosis frequents not only the pallet and garret, but also the gilded dome.

Why do we find it there, where it would seem misery

could not dwell? This state of misery, which paves the way for tuberculosis, is not solely and always acquired—as in those of our patients whose history I have recalled in a few words. It is frequently hereditary. There are infants who find indigence in their cradle, as others find there strength and riches; in this sense they receive from their parents a general debility, an organic and dynamic state of being which will make them always feeble and weak men, keeping ceaseless company with misery in spite of the luxury and comfort with which they are able to surround themselves.

These indigents by right of birth, these candidates for tuberculosis, among whom there will be almost as many elected as nominated, are commonly the fruit of the unions of valetudinarians or aged couples, or rather of disproportionate couples, the vigor of the young wife not being able to compensate for the senility of the husband; these are as in the common saying of the world, the children of the ancients. They have received from their ancestors a taint of general debility, a feeble organic and dynamic value, a greater need to provide against indigence. By this you comprehend better the heredity which, Louis asserts, exists at least once in every ten.

We shall return to this question and see if there is any other way of understanding hereditary tuberculosis, than by the fact that parents of feeble constitution, debilitated by excess, weakened by inveterate and accumulated diatheses, or languishing by age, beget infants, born with little resistance, that is to say, prepared by their congenital indigence to succumb one day or another to tuberculosis.

It is because that tradition, in accord with clinical experience at all times, and in all countries, shows that tuberculosis rides daily at the side of all the miserable, all the feeble, and all the failing, as Prof. Peter has said: "It is exhaustion, however it may come, that causes tuberculosis;" and as Pidoux has defined phthisis: "Not a malady which begins, but a disease which ends."

But, gentlemen, if there are no difficulties in recognizing certain of the preparatory conditions, certain of the occasional causes of tuberculosis; if one sees clearly how they come under the influence of tuberculosis, it does not follow that the *how* of tuberculosis is known unless you penetrate to the determining cause. To say that

tuberculosis is a disease of privation, to recognize certain of the conditions which prepare its genesis, is not telling what the disease is. It is well to know the failing organism becomes a prey to tuberculosis; it is well to recognize certain hereditary or acquired conditions which prepare the ground—summon tuberculosis; but what is there between the causes of morbid opportunity and the appearance of the disease? Misery does not, I imagine, give free course to that famous morbid spontaneity, which, after having had its fanatics, ought not to count its partisans. Tuberculosis does not spring from the midst of the miserable, as formerly Minerva fully armed from the brain of Jupiter; and it is no longer permitted by this time of experimental medicine to credit for tuberculosis what was thought and taught during so long a time concerning glanders.

No more than glanders can tuberculosis be born spontaneously, under the influence of general causes. How, by virtue of what determining cause, does tuberculosis take possession of organisms in decline? How does it rise when the nutrition fails?

Is tubercle the product of humoral troubles, of a perversion in the evolution of some of our secretions? or, rather, does it act by infection, the penetration of the organization by a germ which comes, and falls, and germinates upon soil already prepared? The answer to this question contemplates nothing less than the determination of tuberculosis; it goes straight to the inquiry into the nature of tuberculosis.

Upon this chapter, gentlemen, you will find nothing extended in your text books—"Result of hypertrophy of the organism; diathetic neoplasm; mode of being of the organism in suffering, with production of a neoplasm having a tendency to pass into a fibrous state"—and then, except some variations, this is almost all.

It is a mode of telling briefly that which is, in its anatomical expression, tuberculosis; but it does not describe, still less classify. So great is the embarrassment of our nosographers, that all, in placing tuberculosis among the general diseases, see themselves obliged to place it beyond the boundary, in a place, *incertæ sedis*, intermediate, to diathetic diseases, on the one hand—to virulent diseases, on the other—inclining to think the tuberculosis disease is a diathetic malady, under the pretext that it

may be hereditary and frequently joined to scrofula; inclining, on the other hand, to find in the experiments of Villemin the demonstration of its virulent nature.

To the opinion of the virulence of the disease, in spite of their caution and silence, most of the pathologists seem to join themselves the most willingly, and a few would place tuberculosis in the group of virulent maladies; it not by the side, at least in the train of syphilis, of glanders, and charbon.

Gentlemen, you are not ignorant in the light of those treatises which come from all parts, at the call of the magnificent discoveries of Davaine and Pasteur, that charbon and rabies are considered not only virulent but infectious maladies; that is to say, produced by the introduction and proliferation of living elements, which, in their struggle for existence, begin to disturb the nutrition of the organism, disorder its functions, and produce its reaction. You know that for certain of these diseases classed to-day among the virulent, the morbid agent (the determining cause), infectious element in the species, has been discovered, collected, cultivated, then inoculated, thus enabling experimental medicine to make a clear synthesis when clinical medicine was unable to make an exact analysis.

The history of charbon caused many reflecting physicians to ask if tuberculosis (which the experiments of Villemin had shown to be virulent) did owe its virulence to some infectious agent.

You can not be ignorant that this mode of viewing tuberculosis brought forth from all sides a host of contributions, you would think at the same hour.

It seems as if we are on the point of becoming finally settled in our notions of phthisis, and of seeing tuberculosis pass from the group of diseases *incertæ sedis*, daily becoming smaller, into the growing class of infectious diseases, to the side of epidemic and contagious diseases, of which the infectious character is so transparent, as we observe every day, that there is no need of obtruding the material proofs, which are demanded in the case of tuberculosis. One single decisive fact would suffice to establish forever the nature of tuberculosis, and settle its infectiousness; that would be to discover, isolate, cultivate, and inoculate an element which, by its reaction on the living organism, should always reproduce the same

type—and which should be a tuberculous element, which should give rise to tuberculosis, always tuberculosis, and nothing but tuberculosis; as the bacteria of charbon always produce charbon, and nothing but charbon—the condition of the experiments remaining the same.*

Wanting this decisive proof, we flank the difficulty, and demand, from true observation, from the clinic, as well as from pathological anatomy, if tuberculosis does not present many points of exact resemblance to many infectious diseases? We demand of general pathology if tuberculosis does not behave itself as an infectious disease; if it has the attributes and course of those infectious diseases whose nature is the least contested?

BOOK NOTICES.

THE PHYSICIAN HIMSELF AND WHAT HE SHOULD ADD TO HIS SCIENTIFIC ACQUIREMENTS.—By D. W. Cathell, M. D., Late Professor of Pathology in the College of Physicians and Surgeons of Baltimore, etc. Second Edition—Carefully Revised. 12 mo., Pp. 208. Baltimore: Cushings & Bailey. Price, \$1 25 by mail.

About six months ago we received a copy of the first edition of this work, which had just been issued, and prepared a notice of it; but, through some of those inscrutable ways that sometimes occur in an editor's office, it never appeared. What added to the mysteriousness of the occurrence, with the disappearance of the written notice the book disappeared at the same time, and never after materialized. But the loss has now been fully repaired in consequence of the work having been so favorably received, as to require a second edition, of which the author has kindly favored us with a copy.

While the work contains some advice to physicians to which we can not subscribe, yet there is in it a very great many excellent precepts which are worthy of study and adoption. By precepts we do not mean mere moral sentiments, but practical information in regard to a physician's conduct in his intercourse with his patients, and others with whom he is brought in contact. If the young physician, on setting out to practice his profession, and many

*Have not Koch's experiments furnished the decisive fact?

older ones, too, who have been for a long time engaged in business, would carefully treasure up the information found in it, "there would be saved many a blunder and foolish notion"—respect and professional dignity would be subserved, and usefulness greatly increased.

We recollect that in the notice we prepared on receiving a copy of the first edition, but which, as we have explained, did not appear, we took exception to a portion of the following advice, which we have since found excepted to in our namesake of Philadelphia: "It is not unprofessional to keep at hand your library, microscope, and other aids to precision; also your diplomas, certificates of society membership, pictures of eminent professional friends and teachers, anatomical plates, or anything else that has associations in your mind; but it is better to have such only as have relation to you as a student or as a physician. Professional relics and keepsakes whose history is connected with your medical studies, such as the human skeleton, either entire or in parts, pathological or anatomical specimens, and mementos of your dissections, are both appropriate and useful."

We consider it quite proper that a physician's office should look like one, and, therefore, we regard it quite in keeping for a physician to have his bookcases containing his books, in his office, especially if he is in the habit of consulting them; and as walls look better with some pictures on them than they do when bare, it is not inappropriate to have the pictures of eminent men of the profession placed here and there. Also, if a microscope, stethoscope, and a few other "instruments of precision" should happen to be in sight, we would regard it as unobjectionable. Such things would tend to discriminate a physician's office from a lawyer's or a minister's sanctum, and show that it was occupied by a scientific man who employed instruments to work with. To carefully exclude everything from sight except some chairs and a table is running to the extreme in modesty, or rather in the appearance of it, and affords as much evidence of vanity as a profuse purposed display. Intelligent friends know that a scientific physician has numerous instruments for investigation, and the careful, constant habit of never permitting any of them being seen displays a straining of modesty. But unsightly or immodest instruments, or those whose uses we would shrink to speak of in common

conversation, as obstetric forceps, catheters, etc., should never be paraded in sight. Nor should amputating knives, splints, and other instruments that suggest horrible accidents and distress to the non-professional, and cause the doctor to be looked upon with a shudder as a butcher. But the most objectionable object that we can possibly conceive of to be placed in view is a skeleton. If there was no question of taste involved in an exposure of the kind, we would be afraid that the majority of persons would fear to enter our office if we had a human skeleton on exhibition. Every association connected with it is horrible and repulsive.

We can not also help but consider it in bad taste to have a diploma framed and hung up. It is not a work of art, and, therefore, ornamental. Like a deed to property, it is merely to be preserved to be employed in evidence when necessary, and like it, it is best kept in a case.

But while the work has a very few things in it we do not indorse, it is filled with matter that every one would commend. Besides fully explaining the duties which physicians owe to their patients, and setting forth rules of conduct in their intercourse with them, and describing how they should treat one another, there will be found a large amount of general information in regard to professional matters, which every regular practitioner is not familiar with, a knowledge of which will tend not a little to increase his intelligence.

Our author very correctly shows that there are no allopathic physicians and very probably there never was. The term allopathic is only an invention of the enemies of regular physicians. An allopathic physician, if there should be one, would be one whose restricted creed, from the meaning of the word, would require him to substitute some other disease for the one he was called upon to treat. As no physician ever treated diseases on any such principles, there never was an allopathist. The homeopathist creed is "*similia similibus curantur*," and, consequently, he desires to create the belief that regular physicians are governed, too, by a restricted creed, but which is just the opposite of his. But the regular physician finds his method of treating diseases, after enlightening himself as fully as possible by a thorough study of anatomy, physiology, pathology, chemistry, etc., in the observations and experiences of himself and others—first of others, as they

have been set forth in books and lectures, until he is able to make them for himself, and then he joins his own with theirs. He has no dogmas. He deals altogether with facts and rational conjectures. He is at liberty to prescribe the smallest dose—an infinitesimal one—or a very large one if an enlightened experience approves it. Restricted by no narrow dogma, he enjoys the fullest liberty. He can appropriate knowledge wherever he finds it, and if, as Dr. Cathell says, there was anything in Homeopathy worth appropriating it would have been appropriated or absorbed into regular medicine long before Hahnemann announced it.

We hope that all of our subscribers will procure the work by remitting to the author for it and study it. It is worth many times its price.

A MANUAL OF HYPODERMATIC MEDICATION. The Treatment of Diseases by the Hypodermatic Method. By Roberts Bartholow, M. A., M. D., LL. D., Professor in Jefferson Medical College, etc. Fourth Edition. Revised and Enlarged. 12mo. Pp. 365. Philadelphia: J. B. Lippincott & Co. Cincinnati: R. Clarke & Co. Price \$2.00.

The author of this work, as is known, is a most extensive writer upon medical subjects, having contributed largely to journals, and being the author of a number of works. But while his pen has been prolific, it has not followed with it, as has often been the case under such circumstances, that the value of the productions suffers dilution as they are increased, and is inversely to the quantity. Prof. B.'s works have become standard ones so soon as issued, and are quoted from as authorities.

When the third edition of the work before us was issued, it was the only work on *hypodermatic* medication in the English language, and it is our impression that it still continues to occupy the field alone. It occurs to us that, so fully is the subject treated, there is really no room for another, or, at least, no need of any other, unless, may be, it would be desirable for some enterprising writer to share the honor in disseminating the same instructions that are embodied in Prof. Bartholow's work. We certainly can not imagine of anything more, of importance, that is known in regard to *hypodermication*, than is set forth in it. Starting out with a history of hy-

podermication, the author treats of its methods, describes the best instruments, the mode of injecting, explains the actions and uses of the remedial agents employed hypodermatically, etc. While the author employs his own experience largely, yet he has not neglected the contributions of English, French or German writers.

No one who consults the work will be disappointed in obtaining full information in regard to the important and valuable method of administering remedies by hypodermication.

ESSENTIALS OF VACCINATION; A Compilation of Facts, Relating to Vaccine Inoculation and its Influence in the Prevention of Small-Pox. By W. A. Hardaway, M. D., Professor in the Post-Graduate Faculty of the Missouri Medical College, etc. 12mo. Pp. 145. Chicago: Jansen, McClurg & Co. Cincinnati; R. Clarke & Co. Price \$1.00.

Physicians will regard this as a very valuable little work. Although it does not pretend to be a comprehensive treatise on vaccination, yet it contains all the more essential facts relating to this subject.

In order that our readers may understand the scope of the work we will give the headings of the ten chapters into which it is divided: 1. History of Vaccination. 2. Variola in Animals. 3. Nature of Vaccinia. 4. Vaccinia in the Human Subject. 5. Abnormal Modifications and Complications of Vaccinia. 6. Revaccination. 7. Merits of Different Kinds of Vaccine Virus. 8. Methods of Obtaining and Storing Vaccine Virus. 9. The Operation of Vaccinating. 10. Examination of the Objections to Vaccination.

While the author regards the humanized crust or scab as far inferior to other preparations of vaccine, he considers it dangerous, containing of necessity blood-cells and necrosed tissue. Lymph should be taken when the vesicle is fully formed, before the areola appears, or within a few hours of its commencement, which is the day week of the vaccination.

The author gives the preference greatly to bovine virus compared with humanized. He considers that erysipelas is far less apt to follow it, and there is no danger of syphilis being entailed by it.

EDITORIAL.

THE translation of Dr. Kinsman, which appears under the head of Translation, having been received very late, has crowded out a number of editorials, among them a squib we had prepared in continuation of what we have said on the action of the West Virginia Board of Health.

We are contemplating offering, in the MEDICAL NEWS, a number of accounts for subscription, that have been standing for a very long time, for sale. It seems impossible to make anything out of the parties.

JOURNAL CHANGES.—The *Louisville Medical News* announces that hereafter it will be under the management of Drs. L. P. Yandell and L. S. McMurtry, of Louisville. Both of these gentlemen are widely known to the profession, and possess both talents and culture, and will, no doubt, maintain the popularity of the journal with the profession the same as when conducted by the late esteemed Dr. Cowling.

The *Sanitarian* announces that on the first of next year it will appear as a weekly journal, with thirty-two double-column quarto pages. It will continue under the editorial management of Dr. A. W. Bell.

TO BE COPIED INTO THE PRACTITIONER'S NOTE-BOOK.—Inhalation of five to ten drops of amyl nitrate will break up the chill of malarial fever; so will the hypodermic injection of one-sixth of a grain of muriate of pilocarpine. It is said that twenty drops of oil of turpentine will control the diarrhoea of typhoid fever. Two to five drops of wine of ipecacuanha three times a day will, in the majority of cases, check the vomiting of pregnancy.—*Independent Practitioner*.

SPIRITUAL AND ANIMAL.—Dr. Cathell, in his little work entitled "THE PHYSICIAN HIMSELF," which we notice in another place, gives the following advice: "Keep ever in your mind that many people seem to be two-thirds spiritual and one-third animal; and that others seem to be one-third spiritual and two-thirds animal, between which are all intermediate kinds. If you attempt to treat all of them alike, you will certainly fail. The mental management of the sick is often more difficult than the physical. A close study of mental therapeutics is one of the necessities that the regular profession is still extremely deficient in. Irregulars often give a mere placebo, or useless agent, which faith (psychological energy) on the part of the patient potentizes, and a wonderful cure (?)

results. Novel remedies often assist the cure through mental influence. Many regular physicians give valuable, true remedies, but give them just as they would administer to a horse or a sheep, and seem to despise the aid of faith, mystery, expectation, and hope. They must learn to depend more on the aid of hygiene, diet, and mental impressions in simple cases, and less on large, crude doses of medicine."

THE EMPLOYMENT OF TOBACCO.—It is probable that no physiologist would contend that tobacco, in any form, is essential to the well-being of the body. Thousands of healthy men and the vast majority of women never touch it; yet it is certain that its use is becoming daily more frequent, and that when once introduced into a country it is almost hopeless to eradicate the taste for it. It is clearly not necessary for the exercise of the highest intellectual powers. Dante and Chaucer, Michael Angelo and Raphael achieved their triumphs without its aid; and no ecomium of its virtues will be found in the wise sayings of Sancho Panza or in the pages of Shakspeare; nor have we any record that Milton composed under its influence, unless, indeed, a habit of smoking in bed led to his not very clearly explained connubial disturbances, and to his tart treatise on divorce. Be this as it may, the eagerness with which it is sought after by its devotees, who allow neither manners, nor the presence of ladies, nor the comfort of others, to interfere with their enjoyment; the distress that is occasioned by a temporary failure of the pernicious weed; the difficulty with which the habit of smoking once acquired is broken—indicate clearly enough that it supplies some want in the economy or exercises some influence on the system which can not be replaced by other means. To many men a poison, to others tobacco is the very staff of life, and to be without it is the extremity of misery. Enforced abstinence from it is to many a convict the severest part of his sentence, and the cunning and deception, as well as bribery, employed to effect its introduction into prisons are well known. An amusing address has lately been delivered by M. Bouley to the Societe contre l'Abus de Tabac, on the economical and hygienic aspects of the use of this narcotic. The total value of the tobacco smoked in France amounts, he tells us, to no less than 352,538,000 francs, nearly eighteen millions sterling.—*Lancet*.

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ORIGINAL CONTRIBUTIONS.

Report on Surgery.

(Read before the Canada Medical Association September, 1882.)

BY FRANCIS J. SHEPHERD, M. D., C. M., M. R. C. S., ENG.

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MR. PRESIDENT AND GENTLEMEN,—I do not propose in this report to give an account of *all* the advances and discoveries made in surgery during the last twelve months, because I know from experience how tiresome and uninteresting such a recital of facts is. My intention is to touch on some of the more important and interesting points, so that they may serve as texts which may be elaborated in the discussion I hope will be aroused. The subjects I shall glance at will be as follows:—(1) Treatment of Wounds; (2) Cause of Inflammation; (3) Sponge Grafting and Bone Transplantation; (4) Surgery of the Kidney; (5) Treatment of Club-foot; (6) Surgery of the Joints. The list looks a formidable one, but remember that I only intend to furnish the texts, the sermons belonging to which I hope you yourselves will preach.

The Treatment of Wounds.—Within the last few years this subject has more than ever occupied the attention of surgeons, and has caused many acrimonious discussions. Old methods of treatment have been wholly discarded and new methods introduced, of greater or less value. Some of these are being constantly improved and modified, others flourish for a time, but when the *sun* of experience is turned on them, like the seeds which fell on stony

ground, they are scorched and wither away. At the present time, all methods, however much they differ in detail, aim at keeping wounds aseptic, and are in fact antiseptic methods of treatment. Listerism is only a phase of antisepticism, and does not differ as much from other methods as one would at first sight imagine. The great difference consists in the more gorgeous ritual and its obscuration by the clouds of incense (in the form of carbolic spray) which ascend heavenward as a propitiatory sacrifice to the great Æsculapius. The fundamental principles are, however, the same, viz.: cleanliness, asepticity, rest, support, and the accurate adjustment of cut surfaces; and to Mr. Lister principally we owe the universal recognition of the truth of these principles. He, in fact, by dwelling on their importance and evidencing their truth by the success of his own practice, has revolutionized the surgical treatment of wounds. He has shown that suppuration and the septic condition it leads to may be prevented. He has taught surgeons the necessity of thoroughly cleansing and disinfecting their instruments and hands before operation. At the International Congress held in London, the subject of the treatment of wounds was one of the most important that engaged the attention of the surgical section. From the papers read and the discussion which followed their reading, it was easily seen that the belief in the carbolic spray was on the wane, and that it was desirable that some form of dressing less complicated than Listerism should be employed. Mr. Lister himself spoke in qualified terms of the spray, and hoped at some future time to be able to say "*fort mit dem Spray*." Professor Esmarch's wonderful statistics aided greatly in confirming the confidence of surgeons in rest, support, and infrequent dressings. Much evidence was offered, and many opinions were given which supported the views of Mr. Sampson Gamgee as to a dry form of antiseptic dressing. Since the Congress the dry method of treating wounds with infrequent dressings has made wonderful strides, and bids fair to supplant Listerism as a form of antiseptic treatment. Under dry dressings, wounds heal much more rapidly than under moist warmth, which encourages putrefaction. Iodoform dressings have been most generally used in Germany, but so recklessly that many cases of poisoning from it have been recorded. As much as 7 to 8 ounces have been stuffed into abscesses

and excised joints at one time. No case of poisoning has been reported from Germany where less than 3 drachms was used. Wherever possible I have employed the dry form of dressing, and I think with success. My method of dressing a fresh wound (for which I claim no originality) is as follows: After all bleeding has stopped, and the wound has been accurately closed by cat-gut ligatures, and when necessary by wire ones in addition, I sprinkle over the wound a little iodoform, cover this with a strip of oil silk (to prevent adherence of the wool), and then over all place a pad of boracic cotton. This is kept in place by an accurately adjusted gauze bandage, which must be evenly and firmly applied, so as to get the amount of elastic pressure required. If necessary, as in a limb, a pasteboard or other light splint (well padded) is applied. If the parts can be accurately adjusted by pressure, drainage is not required. The wound, if the patient complains of no discomfort, should not be disturbed for a week or more. When the dressing is taken down, the wound is generally found to be nearly or quite healed. In foul ulcers, this method I have found superior to every other. In some cases of accident, where the tissue is lost, or so much injured as to be beyond repair, I have generally employed the moist form of dressing till the slough has separated. Of late I have been using a solution of boroglyceride, as recommended by Mr. Barwell. This antiseptic, as far as my experience goes, is superior to carbolic acid. It has no odor, and is perfectly innocuous.

With regard to *Inflammation*, and its connection with septic organisms. The theory that you are no doubt most familiar with is that inflammation is due to the introduction of atmospheric germs into damaged tissue, and that if this introduction be prevented, the wound heals without inflammation. Prof. Hueter, Mr. Lister, Mr. Watson Cheyne, and others, have been the most able and efficient advocates of this view. There is, however, another, and I think a more probable explanation of the origin and spread of inflammation, of which Dr. Burdon Sanderson has lately in his Lumleian Lectures given a clear and convincing account, viz., that "inflammation, is the physiological effect of traumatism"; that the exudates of a normal inflammation are not infective; that no inflammation producing organisms exist in the atmosphere; that whenever inflammation becomes infective it owes that property to

chemical change in the exudation liquid which, in absence of any other better explanation, we attribute to the presence of septic organisms or bacteria or, in other words, exudative fluids which are infective owe that property to the exudative soil in which the germs grow, and that atmospheric germs are not *per se* a source of danger. Dr. Sanderson says these germs are not so much mischief-makers as mischief-spreaders—they have the power of developing what he calls a phlogogenic inflection, and of conveying it to all parts of the body. I do not propose to discuss this question, but merely place it before you as a subject for discussion, in its bearing on antiseptic surgery. Before passing on to another subject, I should like to draw your attention to some recent experiments by Dr. D. J. Hamilton on *Sponge Grafting*, and their bearing on surgery. Dr. Hamilton some years ago showed that the vessels of a granulating surface are not newly formed, but are simply the superficial capillaries of the part that have become displaced; that the granulation loops are thrown up by the propelling action of the heart. Whilst pursuing these investigations, Mr. Hamilton was struck with the similarity of the process of vascularization, as seen on a granulating surface, and that which occurs when blood-clot or fibrinous exudation is replaced by vascular cicatricial tissue. He states that blood-clot or fibrinous lymph plays merely a mechanical and passive part in any situation, and that vascularization is not due to the formation of new vessels, but rather to a displacement and pushing inwards of the blood-vessels of the surrounding tissues. He looks upon blood-clot and fibrinous exudation as so much dead matter, which affords merely a framework for the capillaries to ramify in, and proves that it is so by employing sponge to replace it. This sponge is prepared in a special way, and when placed on old ulcers he succeeded in organizing it—or rather filling its interstices with blood-vessels and cicatricial tissue, the sponge in the meantime disappearing by absorption. Many other experiments were made which fully proved his theory. Dr. Hamilton noted a significant phenomenon, supporting the theory that blood-vessels were pushed into the sponge in loops; when the convexity of a loop came in contact with the sponge framework, instead of one of its pores, a curvature formed on the vessel at the opposing point, and on each side of the obstacle there was pushed a secondary

loop similar to that from which both had arisen. These blood-vessels, according to Mr. H., bear with them great numbers of the actively proliferating connective tissue corpuscles from neighboring connective tissue, and these, and not the leucocytes, are the tissue-forming cells. Sponge Grafting, he says, is excellently suited for growing new tissue where that is insufficient to cover a part. Instead of sponge, charcoal or calcined bone might be employed in certain cases, as, for instance, where the formation of new bone is needed.

The *Transplantation of Bone* has been successfully accomplished both by Dr. MacEwen, of Glasgow, and Mr. McNamara, of Westminster Hospital, London. They had been pursuing their investigations on this subject at the same time, unknown to one another. Dr. MacEwen placed his case first before the public. He remade a humerus which had been destroyed by necrosis, by placing small fragments of bone (removed from patients with curved tibiæ) in a groove made in the soft tissues in the position of the humerus. Mr. McNamara successfully replaced a tibia which had become deficient from acute necrosis. He used portions of bone from an amputated metatarsus. The necessity for transplanting bone is necessarily rare, as nature is so skillful in the repair of bone, that the interference of the surgeon is seldom needed. These experiments carry out Mr. Hamilton's theory of organization, and are interesting from a surgical point of view.

The surgeon looks upon no organ or region now as sacred. Operations are at present daily performed successfully which, if even suggested a few years ago, the suggester would have been looked upon as mad. The lung has been partially excised, the liver has been cut into, and parts of it removed successfully. The whole stomach has been excised, and the œsophagus stitched to the duodenum, and many feet of intestines have been taken away, and the cut ends stitched together, patients making good recoveries. The renewed attempts at removal of the spleen have not been so successful as of old, but the whole uterus has been excised, even when pregnant, and the patient has survived, but this now belongs to the realm of gynæcology. The surgery of the organ which I am going to notice has, as yet, escaped the upward tendency of the gynæcologist, but how long it will remain in the domain of pure surgery I know not, as al-

ready one of its dependencies (the bladder) has been annexed in the female.

The *Surgery of the Kidney* has greatly engaged the attention of surgeons during the last twelve months. At the International Congress it was the subject of several papers, and caused much interesting discussion. Since then it has occupied considerable space in the Medical Journals, and the operations of nephro-lithotomy; nephrotomy, and nephrectomy have become recognized operations. It has been established beyond doubt that *nephro-lithotomy* is a most successful operation in properly selected cases, viz., where the stone is of moderate size and single, and the kidney has not become disorganized. It is a most scientific procedure to perform this operation where stone has been certainly diagnosed by needle exploration, or where the pain and other symptoms lead one to believe there is a stone present. If left, the stone is certain to disorganize the kidney, cause much suffering, and probably death. The operation of incising the kidney (*nephrotomy*) has not proved a dangerous one, and it has been frequently demonstrated that the kidney can be easily explored through a lumbar incision, and even cut into with great safety. In cases of strumous or calculous pyelitis, the sacculated kidney can be drained through a wound in the loin, and the patient freed from the danger and pain of retained matter. Nephrotomy, as an operation, is merely palliative, and nephrectomy, or removal of the kidney, is a much more formidable operation than the foregoing. The dangers are greater, and many cases have been followed by suppression of urine. It has also proved fatal from hæmorrhage, and wounds of neighboring organs, as lung and pleuræ. As yet it has not been positively determined in what cases, or at what period, it should be performed. It has been done for tumor, cancerous diseases, and strumous and calculous pyelitis. It is a question whether before nephrectomy is performed, a preliminary nephrotomy should not be tried. Now the loin is the most favorable position for nephrotomy and, perhaps, the most difficult incision for nephrectomy, so this would be an objection. Some hold that if a preliminary nephrotomy is performed, it much increases the difficulty of a subsequent nephrectomy. Again, it is important, in considering the advisability of performing nephrectomy, to find out whether the pyelitis is confined to one kidney,

or, rather, whether the other kidney is healthy. Strumous pyelitis is rarely confined to one kidney, and, therefore, excision of the kidney must be a defective operation, as the pyelitis is only a small part of a general disease.

Th. Gluck has lately suggested a method of pointing out which kidney is diseased. He advises cutting down on the ureter of the supposed morbid kidney, and obliterating its lumen with ligature or clamp. A solution of some salt, rapidly excreted by the kidneys, is then injected subcutaneously, and its presence after a short time ascertained in the urine by means of tests; if none is found, then the other kidney is diseased, and the ligature should be removed and the wound sewed up; but if found readily, the operation of excision is proceeded with.

These are some of the difficulties in the way which make one hesitate to perform nephrectomy. Having, however, decided on the operation, which is the best incision, through the loin or abdomen? Certainly the abdominal incision gives the operator more room, and the surgeon sees what he is doing. Removal through an incision in the loin is very difficult, especially the ligaturing of the vessels entering the pelvis of the kidney, besides, in some people, the distance between the last rib and crest of the ilium is very short; in these cases, of course, the 12th rib has to be excised, or a T incision made, both of which procedures increase the risk of the operation. The only objection to the abdominal incision is that two layers of peritoneum are wounded; but nowadays we are not so fearful of wounding that structure as formerly. I leave the further discussion to you as to when and how we should perform nephrectomy.

Treatment of Club-foot.—As long as these deformities occur, so long will the remedying of them engage the attention of the surgeon. Ordinary simple cases may be successfully treated by bandaging and manipulating, or the use of elastic springs. More severe cases by tenotomy, and afterwards with the proper apparatus, plaster-of-Paris, splints, etc. I should like to hear from the members of this Association their opinion as to the performance of tenotomy, whether, for instance, in a case of talipes equino-varus (the most common form of club-foot), the tibial muscles and tendo-Achillis should be cut at the same time, or whether two operations should be made of the tenotomy. I feel inclined to favor the latter method,

following in the lines of the older authorities,—first, to remove talipes yarus by tenotomy, and after application of a splint, and later on, say in two or three weeks, to cut the tendo-Achillis, and place the foot in good position in a plaster boot or Scarpa's shoe. It seems to me that if the operation be thus performed in stages, the necessity for the more severe operations may often be avoided. I should also like to hear the opinion of the members as to the tendency to relapse. In my limited experience this tendency is great, if the after treatment by manipulation and splint is not for a long period continued.

Mr. Davy, of London, advocates in severe cases with tendency to relapse after tenotomy, that a wedge-shaped block of the tarsal arch should be removed by a fine saw or chisel; the base of the wedge is outwards, inwards, or upwards, according to where there is the greatest deformity.

Dr. Phelps, of Chatauquay, N. Y., has lately introduced a new operation for club-foot. He makes an incision across the sole of the foot, and divides all the resisting structures down to the bones. The foot is then brought into position on a special splint, and the wound left open. By brushing a stick of nitrate of silver through the bottom of the wound the granulations are prevented from springing up too rapidly, and the wound is induced to heal from the sides, and so contraction is avoided. I am afraid that I have already almost exhausted your patience, and so shall conclude this report by touching lightly on the *Surgery of the Joints*. Nowadays, joints are opened fearlessly, and often recklessly and unnecessarily. This, no doubt, is due to the success of antisepticism. At the International Congress this subject was very fully discussed, and the feeling among English surgeons, at any rate, was that most cases of joint disease could be cured by rest. They deprecated the early excision which was advised by continental surgeons, and thought excision should only be resorted to in extreme cases, and that in private practice it was rarely necessary. Since the Congress, a method of treating diseased joints by *Erasion* has come into vogue. Where the disease is confined to the synovial membrane, an incision is made in the side of the joint, an instrument introduced, and the diseased parts of the synovial membrane scraped away. The wound is then stitched up and a drainage tube inserted. Cases are

reported where, after healing of the wound, passive movement was commenced, and the patients recovered, with easily-movable and almost perfect joints. Where the disease commences in the bone, trephining and scraping out the diseased bone has been successfully accomplished, the patients recovering with perfect joints.

König, of Göttingen, in a paper on the tuberculosis of bone and joints, says the synovial membrane is rarely the primary seat of disease in tuberculosis cases, and that not even in the most favorable cases can any cure be expected from any therapeutical measure short of a surgical operation. The surgeon should aim at removing the primary morbid deposit in the bone, and then extirpate the diseased parts of the synovial membrane. In his after treatment he finds Iodoform of the greatest service. In cases where it is used the discharge is usually scanty, and the first antiseptic dressing may remain on for many days. He lays great stress on the point that the disease in the articular ends of bones should be removed before the joint is effected, and where it has already reached the joint, if the joint is opened early, the disease may be removed before the synovial membrane is affected.

I know that our worthy President is rather skeptical about these cases, and so great has been his success with excision, of the knee especially, that he prefers to adhere to the practice for which he is so well known. I merely present these methods of treatment to you for discussion, trusting that some new light may be thrown on the subject.

And now, Mr. President and gentlemen, I have come to the end of the subjects I proposed in the beginning of the report to touch upon. I feel that I have but poorly accomplished the task I set myself to do; still, I shall feel amply satisfied if you, with your matured wisdom and experience, will add your quota to the knowledge we already have of these subjects.

REPORT OF THE COMMITTEE ON MEDICINE FOR 1881-82.

Two events have occurred during the past year which will cause it to be long remembered by the medical world. The first is the meeting of the International Congress in London last summer, and the second—and in many respects the more important—the recent publication of the discoveries in tuberculosis made by Koch, of

Berlin. With regard to the Medical Congress, little will be said more than that in every respect it was a grand success, worthy of the city in which it was held, and of the men who most actively promoted the scheme. The reports of the Medical Department alone are altogether too voluminous to be epitomized, and your Committee can only refer the members of this Association to the volumes already published, being assured that they will well repay perusal.

In this paper, however, the reader will confine himself to the second great event of the year, viz.: Koch's discoveries in tuberculosis, preferring to trace the progress of our knowledge with regard to one disease, rather than to go over the whole field of medicine. In our opinion the latter is given so fully in the annual reports of the *Medical Journal* as to render the reiteration unnecessary.

Tuberculosis is a disease which, for many reasons, is well worthy of our attention. It is by far the most fatal of all, not excluding cholera or plague. From statistics it has been shown that one-seventh of the world's mortality is due to it. Any new light, then, which may be thrown on its causation, or any new points as to treatment, are hailed with satisfaction by the practicing physician.

In order to obtain a more correct idea of the present state of our knowledge, it is necessary to make a study of the literature of the disease from the beginning. To do this, one might begin with Lænnec, whose treatise is a very remarkable one, considering the slim advantages he possessed compared with the pathologists of the present day. Many of his ideas, which for years had been departed from, have again been accepted, an ample proof of their correctness.

He included under the head of tubercle both the grey miliary bodies and the yellow cheesy matter, the result of inflammatory exudation, thus giving two forms of tubercle, the grey and the yellow.

Virchow, who commenced his investigations of the disease in 1850, limited the true tubercle to the grey miliary bodies, considering the yellow masses to be simply the result of a peculiar transformation of an inflammatory exudation. According to his teaching, in the earliest stages the tubercle is a small body, about the size of a pin's head, composed of lymphoid cells in a very fine

stroma. This body unites with others to form nodules the size of millet seeds. These latter shortly undergo a peculiar form of degeneration which he styled caseation. This process is marked first by a drying, and afterward a fatty, change. This is speedily followed by necrosis and softening. Other morbid conditions exhibit the form of degeneration as simple inflammation, carcinoma, etc. In none, however, does it occur so constantly or come on so early as in tuberculosis.

Our present ideas of tubercle do not materially differ from those of Virchow, except that in the center of tubercles large epithelioid cells have been discovered, which are called giant cells. Our knowledge, then, of the pathological histology of this condition may be summed up as follows: Tubercles are small nodules, the result of an inflammatory process, which are made up of giant cells surrounded by lymphoid cells contained in a very fine stroma. These bodies present the peculiar characteristic of early caseation. When we combine the two characteristics, first, that of possessing giant cells, and, second, early caseation, we have a form of disease which differs from any other, although either characteristic may be shown to a greater or less extent in other morbid conditions.

We will now pass on from the minute morbid anatomy to the etiology of tuberculosis.

Several years ago Villemin established by experiment the fact that lower animals when infected by tuberculous matter would themselves suffer and die from tuberculosis.

I need not give the experiments in detail, as they are no doubt familiar to most of you. It was demonstrated (1) that infection could thus be carried; (2) that the disease always followed the natural channels, affecting first parts near the point operated on; (3) that tubercular matter produced the same result, no matter from what organ or part of the body it was taken, whether from the lung, liver, testicle, etc.; (4) all animals were not equally susceptible—Guinea pigs and rabbits were easily affected, dogs, on the other hand, with difficulty; (5) the infection was successfully carried in several different ways—by inoculation, by the breath, and by feeding.

Prof. Cohnheim, in an address published in 1880 on tuberculosis, from the standpoint of the contagion theory, proceeds to explain the many forms of the disease found

in the human subject according to this doctrine. In adults, the lungs are the organs by far the most frequently affected primarily. The virus in minute particles is easily breathed in. In children, the bowels are most frequently affected, a fact which is probably owing to the presence of the virus in the food, perhaps in the milk of affected cattle.

The spread of the disease from one organ to another is also an evidence of the presence of virus. For instance, the lungs are first affected, then the bronchial glands, then the larynx is attacked from the infected matter passing over it. The pharynx follows in order. The œsophagus escapes, as the matter passes through with rapidity into the stomach. The latter organ escapes, owing to the antiseptic character of the gastric juice. When, however, a catarrh of the stomach takes place from the presence of so much irritating matter, the gastric juice loses its properties, and the virus passes through into the intestine, affecting first the mucous membrane and afterward the neighboring lymphatic glands and the peritoneum. There is no doubt but that the virus can also be carried by the blood to distant organs, the brain, for instance.

There are many points in connection with the hereditary character of tuberculosis, and of the manner in which the disease may remain dormant in the system, which might at first present serious difficulties to the doctrine of contagion. When, however, one compares the disease with syphilis, which is accepted on all hands to be contagious, many of these difficulties disappear. In the same way as the virus of syphilis is carried over from one generation to the next, may not the virus of tuberculosis be so carried, through the semen or ovum? As syphilis may be apparently cured, and suddenly break out again after years of freedom from it, does not tuberculosis also remain dormant, and from some sudden irritation again commence its ravages?

The very sudden outbreak of tuberculosis by which patients are sometimes carried off in a few days or weeks, is in all probability produced by the virus passing into the general circulation, from some caseous gland in which it may have existed for years. The writer has himself recently seen a case of tuberculosis in which the patient was carried off after nine days' illness, and in which almost every organ of the body was found to be affected

with tubercle. An old caseous gland was discovered near the root of the lung, which had no doubt been for months or years in existence.

When it is considered that Prof. Cohnheim collected and gave to the profession all these facts and inferences in an address made over two years ago, an address in which he prophesied the certain discovery of the virus, one is not surprised that the whole medical world should be moved with the deepest interest when Koch, of Berlin, demonstrated the presence of the bacteria, which, according to his ideas, are the cause of the disease. He, after two years of the most painstaking work, succeeded by a certain process of staining in bringing into view certain bacteria, which he could only find in tubercular tissue or sputa, and which he could readily distinguish from all other forms of bacteria. These bacilli, which will be demonstrated to you, are small rod-like bodies, about a third the length of the diameter of a blood corpuscle, and have a curved shape. They appear to be made up of spores.

Koch, in his investigation of tuberculosis, in both men and animals, scarcely ever failed to find the bacilli. He found them both in cases where the disease was produced by infection, and also where the disease was, so to speak, of spontaneous origin.

He made also experiments in which he inoculated animals with bacilli which he had cultivated in serum. The disease was produced in the same way as in his previous cases. It is not necessary to go further into the details of this paper, as you no doubt have all read it. One can not read it without being convinced that if he has made no mistake in his manipulation, he has discovered the real cause of the disease. That he has made such a mistake is not likely, as he is a most careful and painstaking inquirer. He has spent eight years in the investigation of bacteria, the last two of which were entirely devoted to the pathology of tuberculosis.

Since the appearance of his paper in the *Berliner Klinische Wochenschrift*, the attention of pathologists throughout Germany has been directed to this subject. Baumgarten, of Königsberg, claims to have made the discovery before the publication of Koch's paper. He made a number of experiments which forced him to the conclusion that the disease was infectious, and that the

real cause could be discovered. Not the least interesting are the experiments in which he infected animals with a number of fluids, as ordinary pus, fluid of sarcomata, and carcinomata, decomposed pus, old dried blood, etc., without in any case producing tuberculosis. Ehrlich has in his investigations instituted a method of staining much simpler than that of Koch, and quite as effective. Take a test tube half filled with distilled water, add to it aniline oil until there is a slight cloudiness, then filter. To the filtered solution add fuchsine, an aniline color, until there is a slight cloudiness. Care must be taken not to add too much fuchsine, as the liquid will become clear again. In this way the coloring fluid is made. Now take some tubercular sputa, place a small drop on a cover glass, press another cover glass over it, so as to leave only a thin layer, and allow them to dry. When dry, pass them through a Bunsen flame, and place them with the sputa side downward in the coloring fluid, and allow them to remain in a half hour in a warm temperature. If the solution is cold, the glasses must be allowed to remain much longer. Now take them out and pass them through a solution of nitric acid in proportion of ten to twenty-six, wash out with water, dry, and mount in Canada balsam. I am indebted to Dr. Councilman, of Baltimore, for the minute particulars under whose direction, in Prof. Chiari's laboratory, the reader of this report has several times made the experiment. The rationale of the process is as follows: (1). The heating in Bunsen flame fixes the albumen on the glass, so that it is not removed by repeated washings. (2). After the staining, it is passed through a nitric acid solution, so as to decolorize the surrounding elements. The bacilli appear to retain the staining notwithstanding the strong acid. In this way one can almost always find bacilli in tubercular sputa, and they are never found in that of any other disease. As a means of diagnosis this may be a matter of great importance. There have been instances in which bacilli were found in the sputa of persons supposed to be suffering from typhoid fever, but when the *post-mortem* was made they were shown to have died of miliary tuberculosis. In our opinion, many cases have been put down as typhoid which have really been tubercular.

After describing the discovery of these germs, and the manner in which they appear to convey the disease, Koch

goes on to explain the phenomena of tuberculosis according to this theory. That the disease appears so frequently in the lungs is readily explained, as the germs are easily taken in respiration. These bacteria appear to be effective in producing the disease after long exposure. Koch succeeded in producing the disease by the inoculation of sputa four weeks old. Patients are not easily affected when the epithelium is intact, but when erosions or congestions take place, the germs find a ready entrance into the body. In children the bowels are most frequently affected, on account of the contagious matter introduced with the food. It is difficult to explain the hereditary nature of the disease by means of this theory. It is quite possible that individuals born with a weak constitution, and possessing a tendency to low inflammation, and cheesy degeneration, should be very susceptible to the virus of tuberculosis. The caseous matter appears to be an excellent nucleus for the development of bacteria. It is difficult to say whether the virus in some different form might not be carried over from one generation to another through the ovum or semen, in the same way as in syphilis.

From the experiments made, there is no doubt that bacteria exist in tuberculosis. So far as yet known they do not exist in any other form of disease. That they are the cause of the disease seems probable. No authority has yet been able to contradict Koch's assertion. In fact, the results of the investigations so far go still more strongly to confirm it. If, after thorough investigation, it should be finally confirmed, a great advance will be made toward the prevention of this frequent and fatal disease.

SELECTIONS.

New York Academy of Medicine.

Stated Meeting, October 5, 1882.

DR. FORDYCE BARKER, PRESIDENT, IN THE CHAIR.

THE scientific paper of the evening was read by Dr. E. G. Janeway, and was entitled, "*Cases bearing on the Diagnosis and Localization of Cerebral Disease.*"

The author said it had been his intention to read a pa-

per bearing on localization and its difficulties alone, but on looking over the literature of the subject he found it had been so carefully and thoroughly, and with such detail, treated of by others, that he thought it better first to consider somewhat the subject of diagnosis of cerebral diseases from general diseases, and then relate some cases bearing on the question of localization.

Among the general diseases which most frequently presented difficulties of diagnosis from cerebral diseases were the fevers. First and foremost of these was typhus fever, on account of the marked cerebral symptoms attendant on it. The author knew of certain cases in which the death certificate had been written alcoholismus, meningitis, encephalitis, etc., when it should have been written typhus fever. The delirium, the stupor, the change in the character of the pulse, and especially the stiffness of the back of the neck, often misled one to make a diagnosis of meningitis, etc., when scarlet fever was present. Illustrative cases were given. The duration of the disease, the surroundings of the patient, the presence or absence of the disease in others in the same neighborhood, etc., were the means by which a differential diagnosis was to be made. There was an affection which might very much resemble both disease of the brain and typhus fever from the fact of the participation of the brain in the process in many cases; that was, acute ulcerative endocarditis. The detachment of soft masses from the valves of the heart and passing into the arteries of the body gave rise to the symptoms which might lead to the diagnosis of brain disease or typhus fever.

Typhoid fever rarely passed under the form of cerebral disease, owing to its longer forming stage, and usually tympanitic abdomen and diarrhœa. The physician might, however, sometimes be misled when there was an absence of the eruption and of diarrhœa, etc., or suppose typhoid fever to be present when there was only a typhoid state in connection with tumor, meningitis, etc., if the full history was not obtainable. He had on several occasions found the muscles tender, etc., and examined for trichinæ; and in others he had to exclude the possibility of basilar meningitis with certain symptoms.

Malarial diseases, fortunately, were not often mistaken for cerebral disease, but the converse was not true. Tumors particularly were apt to be attended with cephalal-

gia, and he had known it to be as periodic as tertian. The earlier stages of cerebral abscess or a meningitis leading thereto might be attended by both headache and hectic fever, which might so simulate malaria as to make the diagnosis possible only after a careful survey of all the symptoms and the history. Some of the severer malarial attacks, such as occur in tropical climates, might cause coma, etc., and lead to the suspicion of cerebral disease.

Pneumonia and pleurisy had been in many instances mistaken for meningitis and cerebral disease, the former much more frequently than the latter or pleurisy.

Bright's disease of the kidneys, more especially the contracted type, in various ways tended to mislead the physician. There was frequent accompaniment of cerebral hemorrhage. One could not depend alone upon the presence or absence of albumen in making the diagnosis, but he must take into consideration the hypertrophy of the heart, endarteritis, etc. Two very interesting cases were given in illustration, in one of which a lad sixteen years of age was supposed from the symptoms present to have basilar meningitis, but at the autopsy there was found to be ventricular hemorrhage, hypertrophy of the left ventricle, and disease of the kidney. The age of the patient, however, it was supposed, excluded kidney disease.

The question of locating cerebral disease must ever be one of interest to the physician. He had seen several cases which seemed to have a sufficient amount of interest to justify him in reporting them. While the symptom—that is, paralysis or spasm—came from irritation of the cortex, or from pressure or destruction of the cortex, and not from that of the subjacent fibres, yet it was seldom limited entirely to the cortex; and since the white fibres were supposed to be simply conductors from the surface, injury to them might also be of some value in rendering such conduction impossible.

One of the best cases he ever saw bearing on the question of localization was that of a man who was able to say only two words—*ja* and *nein*—the German for “yes” and “no.” There was no paralysis whatever; no symptoms except those of aphasia and agraphia, the latter less. He had received an injury at the inferior anterior part of the left parietal bone, at which place there was a depression sufficient to admit the end of the little finger. The location corresponded to the posterior part of the third

frontal convolution. There was no improvement in aphasia during the two years he kept track of the patient, who was an intelligent man.

The next case was that of a man forty-seven years of age, who received an injury on the left temporal region. He fell and lay unconscious for ten minutes. Regaining consciousness, there was found to be considerable swelling at this part, but no wound; he could not speak; water flowed from his lips. There was no affection of the legs or arms, but there was paresis of the muscles of the right side of the tongue, and severe headache. He was unable to talk, and, while he could make letters, he did not place them in order in writing words. He knew the difference between the right and the wrong pronunciation of a word. The treatment consisted in quiet, cold, blisters to the back of the neck, laxatives, and iodide of potassium. He made a rapid recovery, and at the end of eight days was able to speak almost any word, but with considerable hesitation. At the end of six weeks headache, vertigo, the partial facial paralysis, and aphasia were almost completely recovered from.

The next case was that of a lad thirteen years of age, who, previous to the development of symptoms, had struck his head against objects on several occasions. Two weeks after falling and striking his head on a curb-stone, he began to complain of severe headache, the left leg became a little weaker than the right one, the left arm was also a little affected, and before long there was, perhaps, a little squint in the left eye, but there was no proof of it afterward. The headache continued, occurring three times a week, lasting most of the day. With these he would vomit what he ate. Involuntary starts also occurred in the arm, shoulder, and hand. After about four months sight began to fail, and in about six weeks he was almost totally blind. There were no convulsions, no affection of the bladder or bowels. The boy finally became completely hemiplegic, and three days before death he became partially comatose with fever. At the *post-mortem* examination a gliomatous tumor was found to occupy the site of the ascending central convolutions of both sides, projecting into the gyrus fornicatus, etc. Some softening, doubtless, accounted for the fever preceding death. The tumor involved white matter as well as gray.

In opposition to this, another case was related in which

no definite paralysis occurred, although there was a tumor of about the same size as in the former case pressing upon the temporo-sphenoidal lobe. The tumor grew from the dura mater.

The next case was that of a man, twenty-one years of age, who, after a stroke on the head, had left hemiplegia; no rigidity. He became almost comatose. On the next day he had three convulsions, during which there was frothing at the mouth, and he bit the tongue. There was no paralysis of the face or tongue. Sensation on the affected side was blunted. Trephining was performed at the seat of the injury, over the frontal lobe. A small spot of suppurative pachymeningitis was found, an explorative hypodermic needle was introduced, if possible, to find pus; but none was found. Afterward it was discovered that the pus was situated between the arachnoid and dura mater, held by the falx and the lobule. Beyond this, situated a little farther back than the first frontal convolution, was a small hemorrhage. They probably had entered that in exploring the brain, as one time they drew out a little black blood. This seemed not to have any thing special to do with the motor phenomena. The whole surface of the membrane at the seat of the injury before mentioned was coated with pus and fibrinous exudation.

In one case, that of a man who had cirrhosis of the liver, there was paralysis of the sixth and ninth nerves on the left side. There occurred in that case what was said not to occur, namely, pachymeningitis hæmorrhagica, not to a great extent, but sufficient to affect those nerves. Two or three other cases were referred to.

DISCUSSION.

Dr. E. C. Seguin said it was somewhat difficult to take up so extensive a paper as Dr. Janeway's, which touched upon so many points. It was to him a very instructive paper—more particularly the first part of it, which dealt with the difficulty in diagnosis between general diseases which were accompanied by well-marked mental symptoms and ordinary cerebral diseases. He had seen a few such cases, and realized the extreme difficulty with which a conclusion was reached. More particularly had this difficulty been present in cases in which there was a combination of well-marked cerebral symptoms of renal de-

generation, and he thought that in these cases it was sometimes impossible to avoid a double diagnosis. He also referred to a topic perhaps a little outside of the scope of Dr. Janeway's paper; that is, with reference to the diagnosis of conditions of the system which were accompanied by nervous symptoms from actual disease of the brain and its membranes. He referred to the large number of cases of indigestion, a consumption of too much of the carbonaceous foods, etc., producing certain nervous symptoms, as headache, loss of memory, affections of the eyesight, etc., or such symptoms in general as belonged to the lithæmic state. He would not detain the Academy in discussing the second part of the paper. It would seem Dr. Janeway had been led to a favorable consideration of the problem of localizing lesions in the brain, a doctrine which Dr. Seguin had been a supporter of. He had made several diagnoses based upon a firm belief in the new physiology of the brain.—*Medical Times*.

Deafness or Impaired Hearing.

BY W. R. AMICK, M. D.,

Lecturer on Ophthalmology and Otology, in the Cincinnati College of Medicine and Surgery.

THE reason why we have selected this subject is, because it is a disease of a special organ that is not generally understood. It is a disease that affects persons in various ways. The child at school is punished by the teacher because he does not pay any attention to what is said to him. The teacher says that he is dumb or stupid. The lesson on the blackboard may be explained to him, and yet he does not understand it. He looks at the board or at the teacher, while the expression of his countenance would indicate, either that his thoughts were of the bat and ball, or else that he was not capable of comprehending the remarks. A child like this should not be treated too harshly. It may be that there is a defect of hearing that produces this apparent listlessness.

There is probably nothing, outside of diseases of the nervous system, that will produce a more stupid or listless appearance in a child that has once had good hearing than deafness; and adults are not entirely free from this condition.

Aristotle says that there is nothing in the intellect which is not first in the brain. The organ of hearing is one of the avenues to the brain, through which a great many of the ideas have to travel, as they are conveyed by means of sound. With the child at school this is the chief avenue to the intellect. Then when, from any cause, there is an obstruction which interferes with the function of this organ, it is not right to say that it is the fault of the child; that it is stupid and careless and should be punished.

The child may hear what is said one day, and the teacher recognize the fact, and the next day, under similar conditions, so far as distance and tone of voice is concerned, it does not understand what is said. The teacher then naturally supposes that this is due to inattention. But, after all, the child may be correct; for we know that in certain forms of deafness a person may hear better one day than the next. This is a noted fact in catarrhal deafness. On clear, bright days they generally hear better than in damp and rainy weather. The catarrhal form of deafness may be developed from a catarrh of the throat or nose. A great many people have an idea that nasal catarrh can not be cured. This is a mistake and a serious one sometimes, as many a person has lost his hearing simply because he neglected his nasal catarrh.

Deafness not only affects the child at school, but the adult. It is a serious inconvenience to a person's social position, and it is very unpleasant to be with our friends and keep constantly asking them to repeat their statements, or to speak a little louder. With strangers we try to hide our defects, and what we do not hear in a conversation we guess at it. Guess-work is as good as any, if we guess correctly. Some funny mistakes happen sometimes.

It is a recognized fact that certain occupations will cause an impairment of hearing. Especially is this the case where there is much noise, such as the rattling of machinery, escaping steam, and in machine shops where there is hammering on iron, etc.

Engine-drivers have their hearing impaired from this cause, yet, as they are entrusted with the lives of hundreds of human beings, it is necessary that they should have good hearing.

The following is taken from Prof. Moos' article on Rail-

road Accidents in connection with bad hearing of Engine-Drivers. (Archiv. Otol. Vol. XI, No. 2).

"Some hesitation may be reasonably felt in accepting this conclusion (viz., that as long as a conversation in ordinary voice can be heard, their defect involves no danger to the public). Surely the engine-driver is often dependent upon his ears for other information than that derived from a fog signal, or a starting whistle. Often an unwonted sound from some part of the engine, is the first intimation that something has gone wrong with the machinery, the early recognition of which might be of importance. The signals by which passengers can communicate with the engine-driver appeal to the ear, and a slight signal amidst the noise of the train might be unnoticed by men with slight defect of hearing, although capable of being perceived by the normal condition of this faculty. So, again, in such an instance as the Canonbury accident, in which the signal man states that he gave a word of caution to the passing driver, which the latter asserts he did not hear. Whether such warning was or was not heard, or its exact purpose recognized, might readily depend, in some instances, on the acuity of the sense of hearing in the driver. Railway systems are so complex and delicate in their organization, that those who work them need to have every sense in perfect operation. Pains have been taken to obviate the danger arising from color-blindness, and it is certainly desirable that investigation should be made to ascertain how far the effects on the hearing of engine-drivers produced in Germany, are produced also in this country."

The following case was examined by Prof. Moos himself and is given in his own language.

"Andreas Schneider had been an engine-driver for seven years, was stationed in Karlsruhe and had never been on a road where there were tunnels. He consulted me on January 19, 1882, and related the following: On December 23, 1881, while on the journey from Karlsruhe to Rastadt, a cock was blown out by the steam at 5:30 A. M.; on account of this there was a terrible hissing at the locomotive, in order to stop which, the fire had to be taken out of the furnace. "After I had done this we started toward Offenburg. During the first half hour I had severe pain deep in both ears, which then passed off and did not return." He said he had noises in both ears, like the

chirping of a cricket, but more on his right side than on his left, which continued up to the time of consultation. From Rastadt to Offenburg he did not hear the pumping noise which the engine makes in forcing the water from the tank into the boiler, so that the engine-stoker had to attend to this duty for him. He could not do it himself until daylight came. Even then he could not hear the noise of the pump, but by means of his vision he could see that no water was lost while the pumping was going on. Since this time, has not been on the engine."

The examination showed that he had a defect of hearing for some time. The accident to the locomotive probably caused some labyrinthine disease which, would account for the sudden occurrence of deafness in the extremes of the register which existed.

It seems like an unkind dispensation, when a man, after years of conscientious and faithful performance of duty, has become deaf from the nature of his occupation, to be discharged on account of it. But, if his position is one in which the lives of others are entrusted to his care, and the requisite protection can only be obtained by one who has normal hearing, then the conclusion is easily drawn.

To simply say that a person is deaf is a very indefinite way of describing his condition. It includes all of the grades from a slight impairment of the faculty of hearing, to absolute deafness. It will be necessary then to use some term that will express, approximately at least, the degree. The following will be found very convenient: Impaired hearing; Decided impairment; Profound; and Absolute.

We might make the explanations as follows: We will take an ordinary watch, that can be heard with a normal ear at fifty inches. Then when in a given case the watch has to be approximated close to the ear before it can be heard, then we have an illustration of impaired hearing. If the watch can not be heard unless it touches or is pressed against the auricle, then we have decided impairment. If the watch can not be heard when it touches or is pressed against the ear, and the loud voice or loud noise, can be heard, then we have profound deafness. Where the faculty or power of hearing has been destroyed and is entirely gone, then the deafness is absolute.

The degree of impaired hearing can be estimated by testing and expressing in inches the distance that the

watch is heard. If a watch can be heard by a normal ear at fifty inches, and the ear under examination can only hear it at twenty inches, we say that hearing is twenty-fiftieths, written in the form of a fraction.

The watch is also the test that is used when we wish to determine whether the deafness is due to disease of the sound-conducting portions of the ear, and to further ascertain whether bone-conduction increases the hearing power. If it does, then some of the artificial aids to hearing, that depend upon bone-conduction, may be used to an advantage.

Recent Progress in Obstetrics.

W. L. RICHARDSON, M. D.

Significance of Albuminuria.

DR. INGERSLEY contributes a valuable paper in which he attributes the great discrepancy among writers to the fact of the insufficient numbers they have based their conclusions upon. According to his own observations he found albuminuria occurring in 29 out of 600 cases. In only 7 of these were casts found in the urine. One of these had been a sufferer for some time from Bright's disease. The proportion of albuminuria was the same in multipara as in primipara. He is unable to offer any reasons for the occurrence of albuminuria during pregnancy.

During parturition the writer has seen albuminuria in 50 cases out of 153. In only 15 of these has albumen been discovered before the beginning of labor. All causes which give rise to a protracted labor favor the occurrence of albuminuria. The albumen disappeared within 48 hours in 80.5 per cent. In those cases in which eclampsia occurred there was an unusually large amount of albumen, and casts were found in all such cases. The albuminuria found in cases of eclampsia is always of renal origin, of an acute nephritis.

Application of Forceps at the Superior Strait.

M. Obissier discusses the application of the forceps at the superior strait, speaking first of the difficulty and danger of its application above this point, while the head is still movable. Realizing this, version is often to be preferred, especially in a retracted uterus. In such cases as

eclampsia, hemorrhage from a dangerous insertion of the placenta, and some other emergencies, he considers the forceps alone equal to the conditions. Hatin's method of application is generally to be preferred, which consists in introducing the left hand in forced supination into the uterus upon its left side, then passing the left blade along it as a director. The hand is then changed to half pronation, being passed behind the head to the right side of the uterus, and the other blade passed similarly to the first. This is more difficult in execution than in description, and as a substitute the author recommends a method which he has himself adopted. The author being in the classical position, the left hand is carried high up, as if right blade of the forceps were to be supplied. The head is fixed as firmly as possible with the fingers of the introduced hand placed between the head and the uterus. The left blade of the forceps, well oiled, is then passed with the right hand, being gradually worked into position along the left hand as a director, its convex surface following the palm, and readily adapting itself on the left side of the uterus to the foetal position. The left blade being in position, and held by an assistant, the right one is passed in the same way to its proper position. The chief advantages claimed are that the operation is done with small expenditure of force, the head remains fixed during the entire process, and the operator's arms are not crossed as in Hatin's method.

Hour-Glass Contraction of the Uterus.

Dr. F. Barnes reports a case in which he was called to see a patient who had been delivered by a midwife seven hours previous. The placenta had not come away. A dose of ergot had been given, but with no effect so far as producing any expulsion of the placenta. The external os was dilated, as was also the cavity of the cervix. The internal os and the ring of Bandl, just above it, were firmly contracted. It was impossible to introduce the hand within the uterine cavity. Remembering the property possessed by nitrite of amyl of relaxing the tension in blood-vessels, he gave the patient three drops of the amyl on a handkerchief to inhale. During the inhalation the muscular fibres surrounding the internal os gradually relaxed, and he was enabled to pass in his hand and remove the placenta, which was universally adherent. No

hemorrhage followed. The case was interesting, as showing the danger which is liable to follow the administration of ergot before the expulsion of the placenta; it being impossible to know beforehand whether the placenta is subsequently to be found adherent. Should it be attached, the administration of ergot, if followed by any physiological action, must be to produce the very result most to be dreaded—a firmly contracted uterus inclosing an adherent placenta. It is in such cases that Dr. Barnes believes we shall find nitrite of amyl of great value. It relaxes the irregular contraction of the uterus, and acts as a sedative and anæsthetic without producing unconsciousness.

Use of Iodoform in Obstetric Practice.

Dr. Rehfeldt reports a case in which a patient was attacked with puerperal edometritis on the fourth day after a normal labor. The uterus was washed out with a two per cent. solution of carbolic acid, and an application made to the interior of the uterus of five grains of iodoform. A marked improvement was at once noticed; the lochia becoming normal, the pulse and temperature falling. The occurrence of several abscesses, occasioned by the position of the patient, delayed the convalescence, which, however, progressed rapidly as soon as the abscesses were healed.

Dr. J. Mann strongly advises that all wounds along the course of the generative tract should be washed with a carbolized wash and then sprinkled with powdered deodorized iodoform, over which iodoform wadding should be applied. In this way he claims that the absorption of septic material is prevented. Under such applications granulation goes on very rapidly.

Use of Salicylic Acid in Obstetrics.

Dr. G. Bayer recommends that the vagina be carefully washed out with a weak solution of Condyl's fluid, and then that a mixture of salicylic acid and starch (one part to five) be thrown into the vagina. This treatment has been found of great advantage in the Stuttgart Lying-in Hospital.

Nitrous Oxide as an Anæsthetic in Obstetric Practice.

Dr. Klikowitsch reports the result of a series of experiments of nitrous oxide, used with a view of relieving

pain during parturition. He considers it absolutely free from danger to both the mother and child. It has no influence in retarding or hastening the progress of the labor. It acts equally well during either stage of labor, so far as relieving pain is concerned. The patient is not rendered unconscious, and hence is able to use the abdominal muscles to assist in the expulsion of the child. It never produces vomiting, but, on the other hand, checks it, if it is present. It is not followed by nausea or headache. The anæsthesia may be kept up during the whole course of the labor, as a few whiffs before each uterine pain is sufficient to give relief from the suffering. In his experiments Dr. Klikowitsch used a combination of thirty per cent. nitrous oxide with twenty per cent. of oxygen. —*Boston Medical Journal.*

An Old System and a New Science.

BY F. E. STEWART, M. D., PH. G.

In this paper I desire to call attention to a system that is seriously retarding progress in the science of medicine, and to suggest a new system to take its place, devised to promote progress therein. The system under condemnation is that known as the patent or proprietary medicine system. This trade is, at the present time, making a bold attempt to absorb pharmacy and therapeutics, and to usurp the prerogatives of the Medical and Pharmaceutical professions. The suggestion is that the study of drugs, and their preparation and application, be recognized as a science, under the term Pharmacology, or the science of drugs, and that the professions of Medicine and Pharmacy should co-operate in such measures as are likely to raise the standard of knowledge in this branch of science, and to elevate it from the low level to which it has fallen. By so doing, it is hoped that pharmacy may be placed on a scientific basis, as a part of the science to which it belongs, and the Medical and Pharmaceutical professions brought into harmonious relations. This classification of *Materia Medica*, Pharmacy, and Therapeutics, under the general term pharmacology is an old one, but it has either been forgotten, or not brought out with that prominence that its importance deserves.

Wood defines *Materia Medica* as "the substances employed in medicine," Pharmacy as "the art of preparing medicine," and Therapeutics as "the application of medicine to the cure of disease." And he also says that these branches are so closely connected as to be embraced under the general term Pharmacology. This close connection is also recognized in the making of the Pharmacopœia, which was originally compiled, and is decennially revised by a committee representing both professions. This subject, referring as it does to the Pharmacology, and the United States Pharmacopœia, is, therefore, a matter of interest to the Medical profession, and not out of place in the discussions of the American Medical Association, as some would have us believe.

An intimate knowledge of the *materia medica* is indispensable to the true education of the physician. This branch, however, is very much neglected by modern teachers in medical schools, and students leave our medical colleges who have never seen either the drugs, or their preparations, that are to form their armamentarium in future years. Is it any wonder, then, that therapeutics are so far behind other branches of medical science? The result of this want of knowledge upon the part of the profession has led to much of the skepticism that exists at the present time with regard to the action of drugs, and to it may also be traced many of the abuses that are so seriously injuring the medical profession. The success of the proprietary medicine system can also be traced directly to this cause. If it were not so, the patent medicine trade would never have been able to so nearly absorb pharmacy as it has done in the past fifteen years.

A good illustration of the low ebb of medical education in the direction of pharmacy, in this country, is furnished by an incident which happened recently in one of our neighboring cities. At a meeting of the County Medical Society, a member, prompted by a remark made by the writer, asked the question, "What is the difference between a tincture and a fluid extract?" Astonishing as it may appear, not a gentleman present, and among them was numbered a professor in a well known medical college, could answer this simple question correctly, and some of the answers given showed an utter want of knowledge of the first principles of pharmacy. Nay, more; a certain president of one of the leading colleges in the West took

the position in a recent conversation that I had with him, that the Pharmacist occupies the same position to him in a medical relation as his cook occupies in the culinary art. In either case, he does not pretend to know anything about the art, and as long as his servant does his duty by furnishing him good food, or good pharmaceuticals, as the case may be, for the way that he prepares them he cares not a straw. The results of such doctrines will account for the deplorable condition to which education has descended in Pharmacology.

We have two professions working in the field of Pharmacology and known respectively as the Medical and Pharmaceutical professions. The Pharmacist investigates drugs to ascertain their origin, physical appearance, microscopical and chemical structure, and other properties which they may possess, so that he can properly select, prepare, and dispense them. The work of the Medical profession in this field is the investigation of the application of drugs to the cure of disease. The interests of the proprietary medicine trade are diametrically opposed to those of either the profession of Medicine or of Pharmacy, and to the science of medicine. It is an unscientific system, and its whole scheme is the locking up of knowledge for trade purposes. A proprietary medicine is an alleged remedy, the descriptive name of which is claimed as a trade-mark by the manufacturer, who thus monopolizes its manufacture and sale. Most of the proprietary medicines are of secret formulæ, but those advertised to the medical profession purport to be open to scientific inspection. The fact, however, is that the working formulæ are not published, and the art of their manufacture is only known to their proprietors. Any attempt of a competitor to market them is always resisted by due process of law, and the result of this system is that the knowledge of pharmacy is being rapidly locked up by a few trade houses, and the preparation of medicine has become a monopoly. By preventing competition it is possible to create an artificial demand for these imitation pharmaceuticals by ascribing to them marvelous virtues which they do not in fact possess, and at an exorbitant price, by highly colored literature, and florid advertisements. The Medical profession are tricked into furnishing certificates as to their value in treating the sick, without that careful investigation of their secret of manufacture, and of their

reputed properties, necessary to justify an opinion; and then the whole advertising machinery is turned to creating a demand among the people under the sanction of the medical profession.

By this proprietary medicine practice, compounds of drugs of every-day use are placed on the market under fanciful names, the sole use of which is monopolized by the manufacturers. With the large margin thus made possible there is a lavish use of printer's ink, and we have both professional and secular journals, and the religious press as well, filled with advertisements of *bronchines*, *gastricines*, and *gonorrhœaines*, and a host of other compounds, of equally scientific names, with the fashionable *ine* termination. The ultimate purpose or end of this class of remedies is direct advertising to the people in the religious, literary, and secular press, under the physician's sanction and recommendation. This form of proprietary medicines thus becomes the most formidable and dangerous rival to the Physician and the Pharmacist, both professions being robbed of patronage, which is adroitly wrested from them by the patent medicine trade.

Doctors who prescribe this class of pharmaceuticals prescribe themselves out of practice:

1. By enabling the patient to prescribe the same article or similar preparations for himself in the future, and thus dispense with the physician's services.

2. By encouraging the patient to purchase direct from the druggist, who can hardly be blamed for furnishing supplies according to the demand thus created.

3. By patients recommending the ready-made remedy to their friends afflicted in any similar manner, who also treat themselves henceforth without the aid of a physician. One prescription may in this manner sell dozens or hundreds of bottles which the physician did not prescribe, and for which he receives no compensation.

4. By the business monopoly and prosperity accruing to the manufacturer, if the remedy affords relief or cure. In this case the manufacturer secures the credit of the cure: but if the remedy fails in the first instance, the censure is ascribed to the doctor for prescribing it, and confidence in his professional skill is correspondingly depreciated.

The effects of the proprietary medicine system on the pharmaceutical profession, and on medical science, are best illustrated by the following cases which have

happened during the past year. The first one is the celebrated international case of Allen & Hanburys, of London, against Parke, Davis & Co., of Detroit, and the other was the case of Willis A. Gregory and Willis G. Gregory against Bodenback, of Buffalo, N. Y. Both were for alleged infringement of trade-mark. In the first mentioned case the prosecution were defeated and withdrew the suit, in the latter, however, a compromise was effected contrary to the interests of scientific medicine.

Idiocy with Paralysis and Congenital Aphasia; Atrophy of Convolutions.

BY JAMES SHAW, M. D.

G. L., admitted second time March 1, 1880, æt. 18. First admission, Feb. 19, 1877; was then described as having both legs flexed, and right arm flexed and useless. Could feed himself with left arm. Unable to express himself except by screams and howls. Very passionate. A month afterwards was said to be easily amused, and generally happy. First record of an epileptic seizure occurs about the beginning of July, 1877. In the medical certificate on which he was readmitted, March 1, he is said to have been very noisy, frequently shouting and yelling, and also dirty and destructive in his habits. Condition within a week after admission: he is small for his age, and deformed, with both lower extremities paralyzed and contracted, and right arm in a similar condition. Circumference of head 20 inches. Pupils dilated but equal. Makes an inarticulate noise, but can not speak. Took food reluctantly at first, but takes it well now after having an enema. Knows his name, and when asked where the "baby" is, beats his deformed right hand with his left. Responds to the name of "Georgie" by facial-expression and inarticulate sounds. July 2. Has gained flesh, and is more cheerful in expression. Takes notice of surrounding objects, and is jealous of another idiot boy. April 2, 1881. Is much thinner and more haggard, and has symptoms of acute phthisis, but no cough, expectoration, diaphoresis, or diarrhœa. Taking extra diet, tonics, and cod liver oil. Cries, and moves his head from side to side when annoyed. June 17. Eyes large, and affected at times with move-

ments resembling nystagmus. Both legs contracted; thighs flexed on abdomen, legs flexed on thighs, feet normally placed with regard to legs. Right arm contracted, with shoulder and elbow joints stiff, forearm being flexed on upper arm rigidly; wrist flexed on forearm; can move fingers a little; arm remains stiffly against side; can move left forearm, hand, and fingers freely; can not, or does not, extend forearm or arm fully, and movements at the shoulder are restricted. Limbs all emaciated. Vomiting at times. Apparently sees and hears well. Seems to have a friendly regard for one of his fellow-patients; prefers being fed by him, and makes an inarticulate noise, as if to express pleasure, when addressed by him.

Lower limbs drawn over to the left side, and trunk deformed, the thorax being flattened on right side. Lies on his back, inclining to the left side. Cutaneous sensibility retained. July 2. Very thin and feeble, and takes food reluctantly and sparingly. July 5. Very pale and feeble, and almost incessantly whining. Died July 10, 1881, of phthisis.

Autopsy. Body emaciated and very small, having the appearance of that of a child of seven or eight years. Lower extremities very firmly contracted, and drawn over to left, and would not assume the straight position on the application of force, even after tenotomy had been performed. The right side of the chest was shallower, and had the appearance of being more superficial than the left, in the supine position. Thorax: Right lung small and tuberculous in its whole extent, with a large cavity near the middle (from base to apex). Left lung tuberculous at apex. Fluid in pericardium. Heart small. *Cranial cavity.* Arachnoid opaque. Cerebrum small. Cerebellum proportionately large.

	Weight.
Left Hemisphere of Cerebrum.....	4,598 grs.
Right " "	5,640 "
Left Half of Cerebellum.....	1,078 "
Right " "	1,050 "
Pons and Medulla.....	361 "

Total weight of Encephalon free from membranes....12,727 grains.

I. Left cerebral hemisphere. Ascending parietal convolution very short, and reduced to a ribbon-like band, except about three-quarters of an inch superiorly. Ascending frontal atrophied for about half an inch of its

extent, commencing a quarter of an inch from its inferior extremity. Third frontal atrophied in all its extent, and very small. Lower ramus of the second frontal atrophied for about an inch, commencing a quarter of an inch from the ascending frontal. Temporal lobe deformed. First temporal convolution (anterior half) forms only a thin lip to the fissure of sylvius, second temporal also atrophied anteriorly. In consequence of the convolutions above and below it being atrophied, or arrested in development, the Island of Reil was abnormally exposed.

II. Right cerebral hemisphere. Convolutions much more massive than in left. Ascending parietal, otherwise massive, reduced to a ribbon-like thinness for an inch, commencing about an inch from its superior extremity. Occipital convolutions apparently less extensive than those of left hemisphere. Central ganglia much larger than those of the left side. Crus, pons, and pyramid less developed on left side.

Remarks: In this case we find almost complete dextral hemiplegia concomitant with extreme atrophy of the left ascending parietal convolution; aphasia with atrophy or arrest of development of the left inferior frontal; left crural monoplegia with atrophy of a portion of the right ascending parietal; absence of sexual instinct and power of locomotion; existence of seemingly normal vision and hearing; power of moving eyes freely in all directions, with large and relatively very large development of the cerebellum.—*Jour. Mental Sci.*, July.

A Case of Intussusception with Recovery

BY S. W. LANGMAID, M. D.

At the last meeting but one of the Section a fatal case of intussusception was reported by Dr. Rotch. The next day, March 10th, I was called to a female child of five months, who was the subject of the same accident. The infant had always been well, and had not been particularly constipated.

I saw her on Friday. She had been well until Tuesday night, when she was restless, desiring to nurse often, but rejecting the nipple immediately. The next day she vomited, and cried out at intervals as if from severe pain. At

noon she began to have bloody discharges. The pain and bloody discharges continued until I saw her on Friday. She appeared stupid. The pulse was 120. The abdomen was not distended or tender to pressure. The finger, inserted its whole length in the rectum, encountered a tumor with a central indentation, reminding one by its shape of the neck of the uterus.

Dr. Summer saw her with me two hours later.

A cylindrical tumor existed in the region of the descending colon. The invaginated intestine had come down to the anus, and, holding the child in the inverted position, was seen to be of a chocolate color. The duration of the lesion, forty-eight to sixty hours, and the appearance of the bowel, decided us against any mechanical interference. The condition of the child remained the same, except that the discharges of the blood became less frequent and smaller until Sunday night, when the patient became brighter, nursed, and retained the food. On Monday there were two natural dejections, the tumor had disappeared and the child was well.

I suppose the different result of this case from that reported at the last meeting was due to the situation of the lesion.

Dr. Whitney says that in the palliative treatment of intussusception a spontaneous cure is observed in fifty per cent. of the cases. It seems to me that the prognosis must depend very much upon the situation of the intussusception. If it occurs in the small intestines, and especially if the ileo-cæcal valve is invaginated, the chances of spontaneous cure would be less than when the descending colon is the region involved.—*Boston Medical Journal*.

Pneumonic Phthisis.

[BY WILLIAM PEPPER, M. D., PHILADELPHIA, PA.]

THE patient, 23 years of age, single, by occupation a sewing girl, was admitted to the hospital on the 19th of February. She told us, when she came here, that she had already lost two sisters from consumption, but that she herself had always been entirely healthy until about a year before the time of her admission. She dated the beginning of her sickness back to a day when she became

very much overheated, and was immediately afterwards chilled through. Following this plain history of an acute beginning, came cough, pain in the right side, and fever. There was no spitting of blood at first. There was some loss of flesh, but according to the patient, neither the pain nor the loss of flesh were persistent symptoms. Five months ago the woman caught a fresh cold, and since that time her monthlies have not made their appearance. Lately the loss of flesh has been more marked, and there has been greater depression and weakness than was previously the case. Even in the past five months, however, none of her symptoms have been as pronounced as might have been expected. Her case has been subject to very marked occasional remissions and exacerbations of intensity. Since she caught the second cold her cough has been more persistent, and the sputa more abundant, taking it all in all. Nevertheless, no one would suppose, from outward appearance, that the girl was suffering from any grave disease. Upon admission, her temperature was 101° , her pulse 118, and, her respiration 24. She was quite feverish. The patient was evidently, at the time, laboring under an acute exacerbation of the disease. Her urine was high colored, but the most careful examination failed to reveal the presence of any sugar, or of any albumen. Physical examination of her chest very soon convinced me that there was a cavity of unusual size in the right lung. Auscultation revealed metallic respiratory murmur, with occasional metallic tinkling sound. When the patient talked in a loud tone, or, better still, when she whispered, there was distinct amphoric echo of the breath sounds. These signs were conclusive in pointing to the existence of a very grave pulmonary lesion on the right side. The other lung, at the time of first admission of the patient, was perfectly healthy, except at the apex, where the percussion note was duller than should be, and the respiratory murmur was somewhat harsh. Of late, I have had occasion to remark once before, the girl had expectorated a great deal of muco-purulent matter, which is very frequently tinged with blood. The resident physician, Dr. Collins, says that the sputa must amount to a pint, or over, in the course of the twenty-four hours. On some few occasions, quite recently, the matters expectorated have had quite an offensive odor. We have treated the patient with cod-liver oil, the syrup of the hypophosphites,

small doses of arsenic, and plenty of good nourishing food, up to within the past week or so. Under this *regime* she has shown the most extraordinary improvement. She gained five pounds in weight almost immediately, and began to look well and rosy. Her breathing became less oppressed, and her fever went entirely away. Her temperature was steadily in the range of the nineties—never running above $99\frac{1}{2}^{\circ}$. Had any one of you gone into the wards at that time you would have asked, "What is this healthy looking, active girl doing in the hospital?" This was her condition until about a week ago, when she grew pale again, and her temperature began to show a marked tendency to rise, mounting up, once, to 101° . There was still the most marked metallic respiration on the right side. The percussion note was, on the other hand, very likely to mislead one not trained in noting small differences of sound. It seemed of perfectly normal pitch, but on comparing it with that elicited from the healthy lung, it sounded amphoric—almost tympanitic in pitch. When the girl spoke in loud tones, or whispered, a distinct metallic echo could be heard. The physical signs, in fact, seemed to be much the same as those which were elicited at the date of admission, except that they were now and then obscured by a loose bronchial rale. The left lung still showed some dullness at the apex, with hard respiration. While, however, the physical signs had remained almost entirely stationary, the rational signs had undergone a most marked exacerbation.

The significant cause of the physical signs was undoubtedly that there was an enormous cavity in the right lung, destroying nearly all of its tissue, while the left lung was but little diseased. The cavity in the right lung is certainly the largest which has ever come under my notice.

The question now arises, How was this cavity produced? Is the case strictly one of gradual destruction of lung tissue, as in tubercular phthisis? I think not. I should rather ascribe the present condition of the right lung to a latent pneumonia, which led in time to pneumonic phthisis. The lung was the seat of a cheesy degeneration; then there followed the breaking down of the softened lung tissue, leading to the formation of a cavity. The history of the case favors, I think, this view—the acute beginning, the extensive disease of one side of the lungs, and the slight affection of the other side. The right lung to-day

is almost liquefied. We might, indeed, call this case one of pulmonary abscess, were it not for the local irritation set up and for the very evident constitutional tendencies. The left lung slightly tubercular at the apex. The right lung has been destroyed by a pneumonic action.

I want to call your attention to the great disproportion between the rational symptoms and the physical signs of the disease. I very often see just such cases as this one. Of course the physical signs disclose the true nature of the case and the true extent of the disease, but it does not do to base your prognosis upon the physical signs, in such an instance. I desire to illustrate a very nice point of prognosis from this case. *In a case of pneumonic or tubercular phthisis, where the general symptoms are favorable, i. e., are not grave, while the physical signs, on the other hand, point to the existence of very serious disease of lung structure, the prognosis will turn upon the showing of the general symptoms, rather than upon that of the physical signs.* To give more particular force and point to this general rule, I would say that in this case the indications of general good health would lead me to say confidently, although the physical signs are such as they are, that the disease is likely to remain comparatively latent, that the fatal issue, though certain, is likely to be postponed for some time to come. *So long as the general health is comparatively good, the lung disease is likely to remain more or less stationary.* The events of the last few days may change this present view of the case. If the fever and cough increase, and night sweatings and dyspnoea, with general loss of flesh and strength, make their appearance, I shall know that the tubercular disease of the left lung apex is increasing, and, of course, modify my prognosis accordingly. At present (I wish you to understand me thoroughly) I say that the ultimate prognosis is bad, very bad, but that death, though none the less certain, may be more or less delayed owing to the comparative latency of the disease in the left lung.

How are we treating the girl? We have been giving her, and we shall continue to give her until the temperature becomes normal, Niemeyer's pill—at least a pill resembling Niemeyer's, which we use at this hospital. This pill contains belladonna, digitalis and quinine, but not any ipecacuanha. She takes this prescription thrice daily. It is already beginning to control the febrile manifesta-

tions. In addition to this, she is taking inhalations of Lugol's solution (of the strength of five minims to the $\frac{3}{4}$ of water) by the atomizer. When the Niemeyer's pill brings down the fever, we will put the patient on cod-liver oil, the syrup of the hypophosphites, and arsenic again.—*Virginia Medical Monthly*.

The Destruction of Digestive Ferments in the Alimentary Canal.

OF late years the use of digestive ferments has very considerably increased. It is not uncommon to give patients with weak or disordered digestion extracts containing pepsin or trypsin, in order to aid the conversion of proteids into peptones. But while this increase in the use of extracts containing ferment, by physicians, has been going on, little has been done by physiologists to add to our knowledge of the conditions under which the administration of these ferments may, with confidence, be regarded as profitable or profitless. Some of these conditions are pointed out by Mr. Langley, of Cambridge. He finds that those digestive ferments which are secreted in a neutral or alkaline fluid are rapidly destroyed by acids, and that those which are secreted in an acid medium are rapidly destroyed by alkaline salts. Thus the ferments of saliva and pancreatic juice are destroyed in the stomach; the ferments of the gastric juice are destroyed in the small intestine.

Hence it is very improbable that a pancreatic extract given with food aids digestion to any appreciable extent. The trypsin and other ferments contained in it are rendered ineffective before they reach the duodenum. By some, a pancreatic extract containing zymogen (*i. e.*, a substance capable of giving rise to ferment) is recommended as being preferable to one containing ferment. It is, however, as useless to give pancreatic zymogen as to give pancreatic ferment, since the zymogen is split up in the stomach and the resulting ferment destroyed; and since, further, supposing any zymogen did escape untouched from the stomach, it would remain as zymogen in the alkaline fluids of the small intestine, and so be incapable of aiding digestion by providing the appropriate ferment.

The rapidity with which the sugar-forming ferment of the salivary glands or pancreas is destroyed by the acid of the gastric juice shows that an extract of either of these glands can have very little effect upon starch in the stomach. The effect is indeed confined to a short period at the beginning of gastric digestion. We have reason to believe that for about three-quarters of an hour after a meal there is no free hydrochloric acid in the contents of the stomach. Probably the acid is neutralized by the alkaline constituents of the blood and of the saliva. During this time the conversion of starch into sugar could go on. Since pepsin can not act in a neutral fluid and is destroyed in an alkaline one, pepsin extracts would perhaps be given to most advantage three-quarters of an hour to an hour after a meal, at the time when free hydrochloric acid makes its appearance.—*London Practitioner*.

The Symptomatology of Bright's Disease.

M. DIEULAFOY lately called attention to certain symptoms of Bright's disease (parenchymatous and mixed nephritis), of which too little notice has, he thinks, been taken. The most important of them is frequency of micturition, a symptom which, although frequently associated with polyuria, may exist independently of any increase in the quantity of urine. In some cases the symptom is very troublesome; the bladder has to be emptied twelve or fifteen times a night, and twenty or twenty-five times in each twenty-four hours, and this although the total quantity of urine may not amount to a pint. This symptom Dieulafoy proposes to term pollakuria, and it may be manifested in three forms. 1. An early form may attend the commencement of the renal disease, of which it may be indeed the earliest manifestation and of considerable diagnostic significance. 2. A late form, which attends the chronic stage of the disease which has commenced acutely. 3. A form in which the symptom is attended with great pain and distress, and is accompanied by tenesmus and spasm of the sphincter ani, lasting from three to eight minutes. Another symptom is irritation of the skin. M. Dieulafoy asserts that it is met with in one-third of the persons suffering from "albuminous nephritis," whether interstitial, parenchymatous, or mixed, and that

it is especially frequent in women. This symptom is also met with in different forms. Sometimes it has the character of ordinary pruritus, and may be thus the initial symptom of Bright's disease, preceding for months any other inconvenience. It has been explained by uræmia, and has been attributed to an excretion of urea by the skin, but in one of his cases the symptom was not present, although a large amount of urea was excreted by the skin. In other cases the itching is much slighter, and is described as resembling the sensation produced by the contact of a hair with the skin. The last symptom to which attention was directed is that which is described by patients as the "fingers going dead." It is a sensation of formication or cramp, accompanied by such pallor that the part looks altogether exsanguine. It may last half an hour or so, and then disappear entirely. Rarely both hands are affected, and when it is bilateral and partial the area is always symmetrical on the two sides. It appears to be due to a true vaso-motor disturbance.—*Lancet*, July 1, 1882.

Linimentum Crotonis in the Treatment of Acute Bronchitis.

Dr. R. Park, of Glasgow, Scotland, contributes a paper to *Practitioner* in which he calls attention to a line of treatment which he says has been invariably successful in his hands during the last five years:

As soon as the patient comes under treatment, the chest, in whole or in part, is to be rubbed with two or three drachms of lin. crotonis. If the patient is seen at the very earliest stage, when there is only a slight roughness and pain behind the sternum, then it will be enough to have it rubbed into the episternal hollow, along the clavicles, and down the front of the sternum as far as the ensiform cartilage. Otherwise, the whole front of the chest, the sides thereof under the armpits, and the back between the shoulders should be rubbed. The best manner of application is by means of a tag of cotton wool saturated with the liniment and rubbed till it is dried up. Care should be taken, and the patient warned not to let the liniment *run* down the loins and abdomen, which it is apt to do. Also the applying hand should be carefully washed.

immediately afterward. The application *at once* relieves the patient, and this relief is maintained and increased by having the surface rubbed covered over with a thin layer of absorbent cotton wool, properly retained to prevent shifting. For this purpose an old chamois leather vest answers well.

From repeated personal experience I know that the liniment applied in this way does not produce pain. Sometimes, after twenty-four hours or so, there is a feeling of tenderness or soreness; but if the cotton wool be not disturbed, and violent rubbing be not resorted to by the patient, this soreness is evanescent, and succeeded by an itching, sometimes very considerable, which remains for three or four days. It may be relieved by smearing the eruption over with fresh butter, lard, or vaseline *under the cotton wool*, care being taken, however, not to disturb the cotton where it has become adherent with discharge.

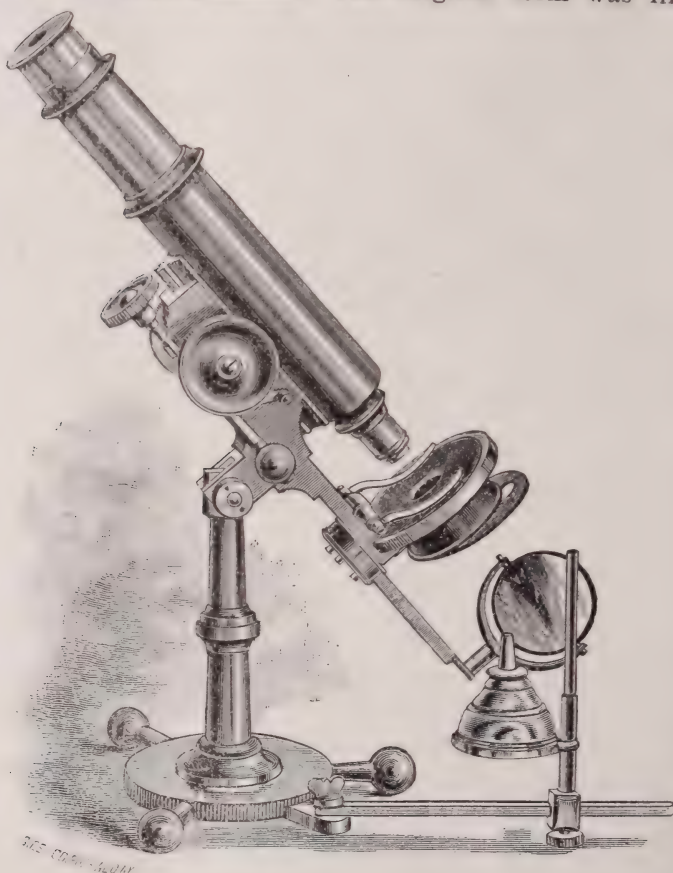
It is this persistence and continuity of effect which makes the application of such signal value, more especially for children and infants. So long as the irritation lasts, so long does the derivative action continue. But it has another great advantage, namely, that it enables the patient to go about his business. There is an impression abroad that it is dangerous for a patient to expose himself out of doors with an eruption such as that of lin. crotonis out upon him. Such an impression is quite erroneous. There is another prejudice against applying it to infants. I can only say that I have had it applied to scores of infants under twelve months, and have never once regretted the practice. On the other hand, I can remember many a time regretting having ordered a poultice under similar circumstances. For the relief of the cough I have prescribed this mixture, which has answered well:

R.	Acidi, hydrobromici,	M lxxx
	Vini ipecac,	M c
	Tinct. belladonnæ,	Mxl
	Acidi hydrocyan, dil,	Miv
	Syr. Scillæ,	3 jss
	Glycerini, q. s. ad.,	3 ii
	Ft. Mist. Cujus cap. coch. min. j. 2 dis. horis.	

MICROSCOPY.

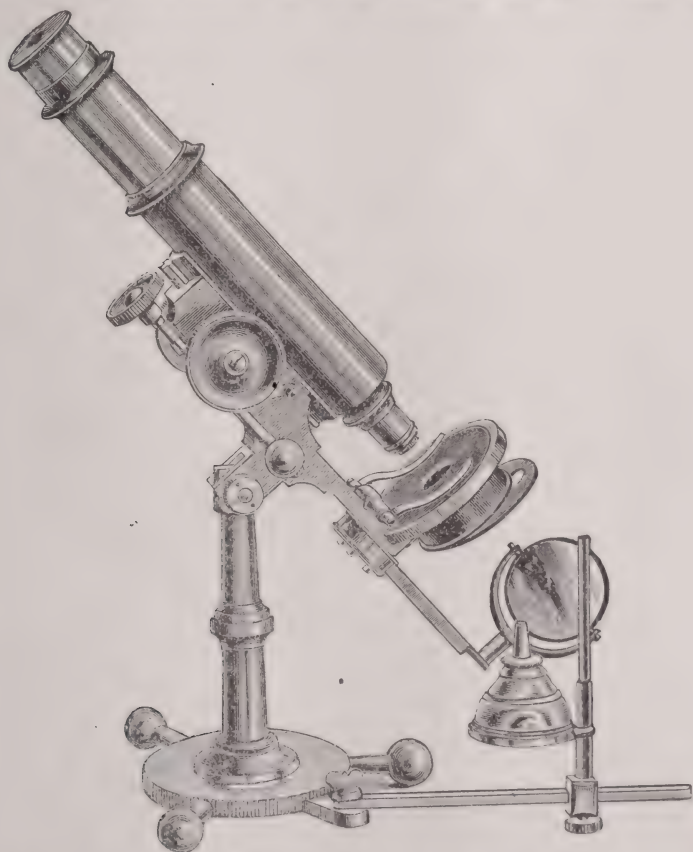
The Improved Griffith Club Microscope.

THE Improved Griffith Club Microscope received its name from the Griffith Clubs of Microscopy of Detroit, Michigan, and of Danville, Illinois. The original form was illus-



trated and described in MEDICAL NEWS in 1880, but since that time there have been so many important changes and valuable additions that little of the original remains except the name. It is now a full-sized monocular when

set up, capable of doing the work of the largest stands, and much work never attempted by other microscopes. It is composed entirely of brass, except the face of glass belonging to the stage; and as every part is designed to do some special work, it is made with great care by skilled workmen, and screws or other devices are provided for



tightening every joint that may become loose through use. For the coarse adjustment a rack and pinion, working very smoothly and without lost motion, is provided; and, in connection with this, is a worm-gear which gives a micrometer movement of nearly three inches, clamping the rack when this is in use, making a safeguard for valuable slides. The stage is round, $2\frac{1}{2}$ inches in diameter,

faced with glass, and provided with a sub-stage ring and diaphragm. Above it, the clips are supported by a bar, allowing the use of the entire stage. The mirror bar is adjustable for length, and may be set at any angle above or below the stage, for opaque or transparent illumination with the double mirror. The standard divides midway between the body and the base, allowing the base to be placed on a spindle, always in position in the box, making a first-class turn-table, which is indispensable for the microscopist. An extra standard, with a wood screw, that may be used to fasten it securely to a work-table or other support, is provided to the body of the microscope, when the turn-table base is in use. Two small holes in the foot allow the attachment of an adjustable lamp holder, which is provided with a small lamp for illumination, dispensing with the necessity of rising to look, and making a superior class or laboratory microscope. The instrument is provided with a morocco-covered, velvet-lined case, about $7\frac{1}{2}$ inches long, 6 inches wide, and 3 inches deep, internal measurement; and in ten seconds the microscope may be taken down and packed, ready for transportation, or taken out and set up for use. Eight of the stands may easily be carried in a medium-sized valise, and when taken out and set up they are steadier and more capable of doing excellent work than many of the large and more expensive stands.

Interesting to Microscopists.

At the meeting of the American Association for the advancement of science, held at Montreal, Dr. W. B. Carpenter, the eminent microscopist of London, gave an address. We quote a few of his statements. "Increased angle has given great power of resolution, but what else? Nothing at all. Angle can only be obtained by lessening the working distance. The result is we see nothing but what is in the focal plane. * * * The best lenses have as large an angle as is compatible with requisite focal depth. * * * It has been claimed that low powers of high angle are equal to higher powers; that a $\frac{4}{10}$ with wide angle will do everything. It will resolve tests, but its continued use will injure the eyes. * * * Dr. Dallinger believes if he had worked with a $\frac{1}{8}$ instead

of a $\frac{1}{25}$ he would have injured his eyes. I hear of Americans making one-inch objectives up to great angles, for which the society screw is too small. This makes a very bad $\frac{1}{4}$ and spoils it for a one-inch. * * High power eye-pieces are valuable for testing objectives. * * * The flagellæ of *Monas termo* would probably not have been found without the wide angle lens, but now that they are known to exist, they have been seen better with a lower angle. A $\frac{1}{2}$ inch of 40° was ordered of Powell & Lealand, who at first were unwilling to make such a low angled glass, but finally did so, and at a public soiree it was exhibited by the side of a $\frac{1}{2}$ inch of 90° , and the difference between them was so striking as to attract universal attention and commendation of the low-angle lens."—*The Microscope*.

GLEANINGS.

AN IRON BOLT REMOVED FROM THE RECTUM.—Dr. W. W. Horton, of Unionville, Conn., recently removed from the rectum of an imbecile and dumb male patient a bolt fully eight inches long, and with a flanged head three-quarters of an inch in diameter. The man was about forty years of age. The bolt had been in the rectum about nine days, and though the patient knew evidently that the piece of iron, which he himself had probably introduced, was the cause of his trouble, he could not make this understood by others. The threaded end of the bolt, which was either in or had passed through the sigmoid flexure, could be felt from without, over the great sacro-sciatic foramen, and had been considered by the man's friends to be a hernia. A truss had been improvised and placed over this.

Dr. Horton, upon being called, explored the rectum and discovered the head of the bolt. Passing an oiled tape over this, he made traction with one hand, while with the inserted fingers of the other he gave a rotary motion to the foreign body, and in this way, after the expenditure of considerable force, succeeded in working it back into the world. The man had been able to evacuate his bowels regularly, and to this undoubtedly is due the fact that no serious symptoms of inflammation supervened. It seems remarkable, from the roughness of the bolt, and the con-

siderable pressure of the pad upon the supposed hernial tumor, that a perforation did not occur.

THE CHEMICAL COMPOSITION OF THE MILK OF COWS FED ON DISTILLERY REFUSE.—Dr. Ellis, at the last meeting of the Canadian Medical Association, read a paper upon this subject. He had made an analysis of the milk of cows fed with different kinds of food. The mean of the solids in the milk of distillery cows was 14.64; of other cows 11.82. The amount of fat in distillery cows' milk was greater than in the milk of others, the minimum of the former being equal to the average of the latter. The casein, sugar, and ash ingredients were much the same in both. The principal difference was the greater amount of fat in the milk of distillery cows. The distillery refuse when examined was found to consist of grain, with the sugar and saccharine matter removed. The fat and albumen remained, together with a small quantity of alcohol, as small as distillers can make it. He could not say whether the use of this food produced any morbid condition in cows.

A NEW REMEDY FOR SPASMS.—The *Medicinische Central-Zeitung*, of July 15, 1882, publishes the result of experiments instituted by Dr. Schiffer, of Berlin, for the purpose of determining the therapeutic value of the *extract of guachamaca*, a tree indigenous on the Apache Mountains. As a specific for all spastic conditions of the motor apparatus we so far possess, in reality, one remedy only, curare, which, however, on account of its dangers, and the uncertainty of its action, as well as of the remedy itself, has mostly been used for physiological experiments alone.

Guachamaca extract, prepared from the bark of the quebracho plant, which belongs to the same class as the oleander (*Nerium ol.*, L.), and of which latter the skin between tree and bark is also poisonous, is a remedy which, while not so dangerous in its effects, is far more reliable and uniform in its action and can besides easily be procured pure and genuine, and of always equal strength, as it is by no means rare.

Schiffer experimented with this drug, and made his observations in the clinic of Professor Frerichs. He employed the remedy in solution, in the dose of one-sixth of a grain, and by the hypodermic method, in cases of tonic and clonic spasms of the muscular system, and always

with a very good effect. He noted also that, administered internally, no matter in what solution, the drug was as little absorbed by the mucous membrane of the alimentary canal as curare is.—*Philadelphia Reporter*.

SULPHUR AND MALARIA.—At a recent meeting of the Paris Academy, M. d'Abbadie called attention to some facts regarding marsh fever. Some African elephant hunters from plateaus with comparatively cool climate brave the hottest and most deleterious Ethiopian regions with impunity, which they attribute to their habit of daily fumigation of the naked body with sulphur. It is interesting to know whether sulphurous emanations, received involuntarily, have a like effect. From inquiries made by M. Fouque, it appears that in Sicily, while most of the sulphur mines are in high districts and free from malaria, a few are at a low level, where intermittent fever prevails. In the latter districts, while the population of the neighboring villages is attacked by fever in the proportion of ninety per cent., the workmen in the sulphur mines suffer much less, not more than eight or nine per cent. being attacked. Some other facts, tending to show the anti-malarial influence of sulphur, are given.

It will be a great comfort for some to know that though the bottomless pit is feverish, there can be no real malaria.

DOMESTICITY AS A CASE OF INSANITY.—Mrs. M——, aged forty-four, mother of eight children, acute mania. The husband, when asked if he could suggest any cause for her illness, exclaimed with much animation that he could not conceive any reason. "She is a most domestic woman; is always doing something for her children, is *always* at work for us all; *never* goes out of the house, even to church on Sunday; never goes gadding about at the neighbors' houses, or talking from one to another; has been one of the best of wives and mothers, and was *always* at home." The superintendent, in commenting on this case, says: "This appreciative husband could hardly have furnished a more graphic delineation of the causes of his wife's insanity, had he understood them never so thoroughly."—*Report of Hartford Retreat for Insane*.

TREATMENT OF INFANTILE DIARRHŒA BY POWDERED CHARCOAL.—Dr. Guerin, in referring to a recent communication

to the *Academie de Medicine*, made by Bouchardat, remarks that for a long time he has been in the habit of combating infantile diarrhœa by mixing the milk in the sucking-bottle with charcoal powder. He usually adds half a teaspoonful of the powder to one bottle of milk. The infants take the milk readily, and in a few days the greenish stools of the little patients change to a dark yellow, while their consistence becomes increased. In addition to the admixture of powdered charcoal, the milk is diluted by one-half or one-third of its bulk of sugared water. He has frequently seen intractable summer complaints yield in a few days to this treatment.—*Canada Med. Record*.

GUAIAC, FOR THE CUTTING SHORT OF ACUTE TONSILLITIS.—Dr. Morell Mackenzie says that guaiac given early will rarely fail to cut short an acute tonsillitis. The formula is as follows:

Ry.	Resin guaiac,	. . . . .	70 grammes.
	Gum tragacanth,	. . . . .	43 “
	Sacchar. alb.,	. . . . .	17 “
	Black currant paste,	. . . . .	q. s.

M. Div. in trochischi No. 350. Sig.: One every two hours.

One can also give aconite, as recommended by Ringer. If the disease is not checked, give small pellets of ice.

THE FREQUENCY OF FLOATING KIDNEY is greater than is supposed, according to Dr. Skorczewski. Among 1,422 persons examined he found 35 subjects (32 females, 3 males). In 5 of these both kidneys were movable.

The causes are, pendulous abdomen, disappearance of circumrenal fat, atony of tissues, subsequent to febrile diseases, and the pressure of some hypertrophied abdominal viscera. In Dr. Skorczewski's cases there was very often observed coexistence of floating kidneys with malarial hypertrophy of the spleen.

NITRIC ACID FOR CHILBLAINS.—Dr. Lapatin who had a large experience with soldiers during the Turco-Russian war, recommends nitric acid as an application in chilblains. Equal parts of dilute nitric acid and aqua menth. pip. are pencilled on the toes, at first daily, then twice a day. After three or four days a brownish scurf is formed, which is thrown off.

ŒSOPHAGOTOMY.—During the last session of the Clinical Society, Mr. Reeves read a paper on the treatment of Œsophageal stricture, in which he advocated the operation of making a permanent opening in the Œsophagus, in preference to gastrotomy, which has proved so fatal. It may be recollected that, in the second case of gastrotomy, then related by the author of the paper, healthy tube was reached *post-mortem*, without great difficulty; and the impression of this case, coupled with the fact that Œsophageal stricture is commoner in the upper part of the tube, induced Mr. Reeves to recommend a cervical exploration before proceeding to gastrotomy. Recently, an opportunity has occurred to carry this plan into effect. A man, aged 63, under the care of Dr. Stephen Mackenzie, at the London Hospital, was referred for operation to Mr. Reeves, who, after consultation with his colleagues, and with the approval of Mr. Adams and Dr. Mackenzie, successfully performed the operation. On reaching the Œsophagus, which was recognized with difficulty on account of its walls being cancerous, a large elastic catheter was introduced, and tied in. A further account of the case will appear in due course. Meantime, the operation is of interest, as showing that the suggestions offered by the author of the paper, at the Clinical Society, have been proved to be quite practicable, and tend to bring this rather rare and difficult operation within the range of practical surgery, and possibly to offer advantages over gastrotomy.—*Brit. Med. Journal*, July 15, 1882.

PORRO'S OPERATION.—On Wednesday, July 12, Mr. Knowsley Thornton performed Porro's operation at the Samaritan Hospital. The patient was thirty-eight years of age, had been married twelve years, and in early married life had had a miscarriage; she had been separated from her husband until within the last six months, and shortly after he returned to her she became pregnant. So far as she could tell, she was about at the fourth month, and had not quickened. She had suffered from abdominal tumor for some six or seven years, but it had not troubled her till she became pregnant. It then began to grow very fast, and on admission into the hospital it filled the abdomen, pressing against the ribs above, and pushing the pregnant uterus down into the pelvis, so that a large portion of the foetus was below the level of the cervix, in the hollow of the sacrum. She was only moderately easy when in bed,

and even then had considerable abdominal pain and occasional difficulty in breathing. She was in a weak and anæmic condition, and able to take but very little food. Mr. Thornton came to the conclusion that pregnancy could not go on; and being doubtful whether the tumor was a dermoid or solid ovarian, or a fibroid outgrowth from the uterus, determined to open the abdomen, perform ovariectomy if it was ovarian, and Porro's operation if it proved to be a sessile fibroid. It was found to have a sessile base, and an elastic ligature was first passed round the neck of the uterus and the pedicles of both ovaries temporarily, and the uterus (with fœtus, both ovaries and the tumor) cut away. No blood was lost, except what was in the tumor, etc. A large mass of adherent omentum was ligatured off, and a Kœberle's wire *serre-nœud* was then applied on the distal side of the elastic ligature, and the latter was removed. The stump was fixed in the lower angle of the wound, and treated with solid perchloride of iron. The operation was strictly Listerian in every detail. There was little, if any, shock, and the patient is now convalescent. The temperature has only once been up to 100.2° ; the pulse on the second night up to 108. The wound has been dressed twice under the spray, and was found dry and sweet. The patient sleeps and eats well, and has (one week from operation) a temperature of 98.4° and pulse 84. The bowels have acted well after enema.—*Med. Times and Gazette*.

OLEATES IN THE DERMATOSES.—We read in the *Medical Summary* that Dr. Shoemaker read a paper at the recent meeting of the Pennsylvania State Medical Society, in which he claimed the following advantages of the oleates over ordinary ointments: First, their deep penetration. The oleic acid gives them active ability to penetrate rapidly into the animal economy, and renders any salt with which it is combined more active and effective in dermic medication. Second, their freedom from rancidity. Third, their cleanliness of application. Fourth, their great economy. Fifth, their antiseptic action. Oleate of zinc is of great value in hyperidrosis and osmidrosis and eczema vesiculosum. Oleate of copper is of great value in tinea. Oleate of alumina is of great value in checking mucopurulent discharges. Oleate of iron has a mild astringent action. Oleate of arsenic is of value in lupus and the ulcerating variety of epithelioma, and is better borne than

other forms of arsenic. The surface must be abraded, otherwise there is no result. Oleate of silver is of value as a local application in erysipelas, and when sprinkled over old chronic ulcers sets up a healthier state of the parts. It is of use in carbuncles and boils, and will often arrest pustulation in its earlier stages.

PESSARY IN THE RECTUM.—Dr. H. L. Turney relates (*Nashville Journal of Medicine and Surgery*) the history of a lady patient who had been treated by a homœopath for retroverted uterus. Dr. Turney was summoned to her one night in haste and found the patient in great pain. He examined her and found a large size Hodge pessary skillfully lodged in the rectum.

NIGHT MEDICAL SERVICE OF PARIS.—In this service there occur about five hundred midwifery cases per year. It is proposed to raise the fee for this class of cases from ten to twenty francs.

TRANSLATION.

How and Why One Becomes Tuberculous.

BY M. L. LAUDOUZY, HOSPITAL DE LA CHARITE.

Translated for CINCINNATI MEDICAL NEWS, by D. N. Kinsman, M. D.,
Prof. of Principles and Practice of Med. in Columbus Med. Col.

(Continued from last number.)

I HASTEN to the second objection, which refers to certain contradictory or doubtful results of experiments. In the first place, *apropos* some fine researches of Mr. Martin, I have told you why certain experimenters have not produced tuberculosis. It is simply because they have not inoculated tubercles, the latter not existing in their pseudo-tuberculous products.

For there are experiments in which they would, by prolonged suppuration and inoculation by non-tuberculous products, obtain tuberculosis. They may interpret this as taking place chiefly from traumatism, fever, and indigestion, which would result in forcing the animals into those conditions which call forth the incubation of tuberculosis. Strong at the time of experiment, the animal be-

comes an invalid, a favorable ground for the incubation of the infectious disease.

If they claim new experiments, yet more conclusive, they have a hundred reasons; but, before God, they can not make a blank table so easily of all that has been done to prove both the virulence and the inoculability of tuberculosis! For upon what disease, if you please, charton excepted, have they made so many experiments, bringing so much of quasi-certainty? For what disease, if you please, has furnished similar contingent of presumptions? Could it be, by chance, for typhoid fever, of which there is to-day no longer any contest as to the epidemic, contagious and infectious character; and, moreover, whence are the experiments so demonstrative that they carry conviction? One does not deny, to-day, the epidemic, contagious and manifestly infectious character of diphtheria; and, moreover, that from divergent demonstrations and from deceptive experiments! Singular contradictions! Whilst they accept as infectious the eruptive fevers, typhoid fever, erysipelas, and many other diseases, which have given less proof than tuberculosis, they could challenge the unanimity of results of the inoculations made as much in France as in foreign nations, from Villemin to Toussaint! For what disease, I repeat it, has approached as near the demonstration?

Gentlemen, we say it here, whilst we are by ourselves, there is a reason that we do not avow, or that a very few have the courage to avow, which makes us fear, in the beginning, the question of the infectiousness of tuberculosis. They fear that demonstration, they fear to be obliged to recognize that tuberculosis is an infectious disease, because the day when this demonstration shall be made they will be obliged to ask themselves, if tuberculosis, like so many of its sister infectious diseases, is not contagious?

Yes, gentlemen, the idea of the contagiousness of a disease is, in general pathology, so often, and with reason, associated with the idea of infectiousness, that many physicians are opposed to the former from fear of being obliged to subscribe to the latter!

Eh! gentlemen, if to-morrow medicine responded in the affirmative to the question of the contagiousness of tuberculosis, it will put no new idea into circulation; it will only have rendered a decree upon a process begun

long ago, and judged with diverse fortunes; a decree rendered by public opinion, before medicine has had necessity to decide as the last resort. Old medicine has been itself the echo of the opinion respecting the appearance of phthisis. Without going back to Galen, you know what Baillou, Cullen, J. Franck, Fernel, and Morgagni believed in regard to contagion; what Andral and Trousseau questioned. A number of physicians to-day believe without being able, it is true, to furnish the proofs of their opinion; without putting their hospital or private practice in accordance with their convictions. And, moreover, among those physicians who have had a long career; among those who, old in practice, have been able to follow the biography of many generations of patients, there are very few who have not seen, and clearly seen, facts which have imposed upon them a belief in the contagiousness of tuberculosis.

I have heard related by my father one instance of contagion, which appeared demonstrative to him, who knew the particulars of the families.

A young man, rich, tainted by personal antecedents of pulmonary tuberculosis, married a magnificent young lady, indemnified from all antecedent tuberculosis, personal or hereditary. A pregnancy followed some months after marriage, labor easy. Eighteen months after, the young woman died of pulmonary phthisis. Two years after, the marriage of the widower into a family, whose healthy antecedents would seem to be able (so to speak of the husband) to compensate the imperfection which the man brought into the union. Two pregnancies, two labors. After the second labor the woman became sick and succumbed to rapid pulmonary phthisis. As for the husband, he died later of phthisis with a chronic course.

My preceptor, Prof. Hardy, has seen similar instances, and you will find analogous cases reported in the remarkable thesis which Musgrave-Clay read last year upon this subject.

Few facts, among those which ought to arouse attention, will appear to you so clear as the following, observed a few years ago in England, by Weber.

A man, son of a phthisical mother, with two brothers and one sister dead from phthisis, in his youth was afflicted by many diseases of the chest, and spat blood at twenty and twenty-one years. He became sailor at twenty-five.

His health was restored, and married at twenty-seven years. He marries four times, contaminates successively his four wives, who die phthisics. He does not dare to marry a fifth time, "from fear," it is the phthisical widower who speaks, "of assigning his wife to certain death." He dies a consumptive himself. His autopsy reveals, in the two lungs, at the side, some ancient scars, some recent tuberculous lesions.

I know, gentlemen, all the objections made to the interpretation of like observations in relation to contagiousness. They object that the fatigues of maternity, vexations, anxieties, regrets, material difficulties, vigils which carry the disease of one of the partners with it, creating from all circumstances the condition of decay, of morbid opportunity, which of themselves would be able to bring tuberculosis upon the other partner, without it being necessary that the latter should be found seated at the bedside.

But, gentlemen, it is not only the phthisic who dies after long months of sleeplessness, of fatigue, of vexations, of anxieties, of material difficulties for its partner. How many diseases of the heart, how many diseases of the nervous system, coming during the weeks and months of confusion in the affairs and desolation in the family, create for the wife that physiological misery which could very well bring tuberculosis; which brings it exceptionally, whilst the physiological misery of the race, favoring tuberculosis, makes it so common.

Why do they not object to these facts that, if phthisis was contagious, "they could no longer debate, the conviction would be imposed upon them with living force, because tuberculosis would be the most infectious of all contagious diseases;" for these facts prove really, although contagious, tuberculosis would justly be the one of all infectious diseases which should not occupy the summit of the scale in infectiousness.

It is in that sense that Prof. Bouchard has been able to say that, if phthisis was a disease which frequently attacked man, it was not (as is syphilis) a disease of man.

Finally, the objection of the non-contagionists—that the facts do not carry full conviction—could be offered, for the same cause and for the same reasons, to many of the infectious diseases, which levy a much lighter tribute upon humanity.

There is among us a small number, it is true, who escape measles and typhoid fever; there are others who escape scarlet fever; more yet who escape diphtheria and erysipelas; and yet these are infectious and contagious diseases. That proves simply that, although infectious as these diseases may be, they carry with them their degree of contagiousness from the beginning, and as a result, we have not realized, in the time mentioned, the conditions of predisposition, without which the infectiousness of a disease remains a dead letter. That proves simply, that, although it may be infectious, tuberculosis is not different from the common infectious diseases; that proves that there is less predisposition for our organisms in the presence of tuberculosis than in the presence of eruptive fevers, for example.

Perhaps we are not yet in position to prove the contagiousness of tuberculosis; but, practically, we have the stern duty, as Prof. Jaccoud recommends, of conducting ourselves as if it had been demonstrated; and that the more, because frequently families will employ the prophylactic measures, which you will know how to institute with tact, without revealing the theoretical opinions which will have dictated your conduct.

Especially, gentlemen, we do not fear the vulgarization of the idea of contagiousness of tuberculosis. Let us not say, with one professor in phthisiology, that, if phthisis was contagious, it would be necessary to limit ourselves from speaking of it, so great would be the fear that the unfortunate phthisics would be deprived of the care of their near relatives!

Does diphtheria, does small-pox, whose contagion is no longer in doubt, cause parents to fear? And then, if we had in possession some demonstration of the contagiousness of phthisis, would it be to the world a sufficient reason for us to keep silence? Whilst they discuss, whether yes or no, they must speak or keep silence. Who knows if this is not in favor of the contagion, that the tide of tuberculosis mounts every day, that in the army there are more die from tuberculosis than in private life? And yet the army, you know, is made up of the best of the population; and, moreover, they have taken care to eliminate from the lists all who on any side approach physiological misery. Would it not then seem that crowding creates

and augments the chances of infection—collects the grain, to which is due the mortality by tuberculosis?

You know the *role* crowding enjoys in the army, in the epidemic of measles, of mumps. Could it not enjoy an analogous *role* in the frightful production of military tuberculosis?

All of us who, under different titles, have passed through the army, know, in respect to promiscuity, in respect to contagion, what a barracks, what a crowded dormitory is. Eh, well! is it repugnant to our mind to have fear of a coughing bed-fellow? Ought that cougher to be removed in a few days? to be removed from the barracks and sent to a hospital? One could listen to such considerations, and find perhaps it is not astonishing that tuberculosis should be the plague of the army, since in 1872 it took 452 men out of 1,000 in France, 782 out of 1,000 in England; and that it cost France 3,600 upon a contingent of 280,000 men! Let me ask those who fear to allow contagion as a factor in this frightful mortality, is it not singular that England, in spite of the rigor of the winter of 1854 and '55, should have lost less from consumption before Sebastopol than in the barracks of the First Royal?

Does not this explain this observation of military surgeons, that, contrary to other plagues of the army, tuberculosis never haunts a campaigning army.

With this glimpse of the possibility of contagion, can we not see the reason for the remark of Prof. Colin, of Val-de-Grace, that acute tuberculosis attacks by series the soldiers who enter the hospital as affected by an epidemic disease? Can we not understand how certain corps of the Paris garrison, always, and for a long time, confined to the same barracks, pay a singularly predominant tribute to tuberculosis?

Do we not understand that the mortality from phthisis in certain corps in Paris augments in ratio as the length of their enlistment—shall we say length of residence in the barracks? Can we not see that acute tuberculosis attacks recruits on their arrival at the corps, as if the seed, without ceasing, brought together and stirred about, had only to fall upon a ground, so much the more fertile as it is younger and better prepared by physiological misery, to which home sickness, insufficient food, confinement and fatigue of a new mode of life, alternating with an exhausting activity, are roads? These are all occasional

causes, which change the firm and vivacious conscript of yesterday, the invalid of to-day, thoroughly prepared to take from his room-mate the tuberculous germ, as he would have taken the germ of measles or mumps.

That which occurs at the barracks takes place more frequently at the hospital than we care to confess. Should we not be more astonished at the number of coincidences, so well known by all of us who faithfully attend the meetings of the Anatomical Society—the coincidence of finding so frequently tubercular granulations in the lungs of the patients who have perished slowly from organic affections, after a long sojourn in the hospital?

Wherefore, from this so frequent coincidence, instead of seeing an antagonism, has been pretended by some between cancer and tuberculosis, one may say that the phthisical from organic affections (this seems especially true of gastric epithelioma) present at the hospital a singular frequency of tuberculous complications, upon which Prof. Peter never failed to insist? It would be very interesting if that coincidence had been controlled in public practice, and if we could exactly know what would happen to a cancerous patient, whether he dies either in the city or in a hospital, where tuberculosis is never absent.

I can not insist too much on that question; but I could wish, in the matter of tuberculosis, whose appearance we observe in the course of an antecedent affection, we had the same manner of proceeding as in the matter of all other diseases coming to engraft themselves all at once upon an anterior morbid state. Where we have, after long months in our wards, a tabetic in his last stages, taken with pulmonary tuberculosis, do we ever ask ourselves how and why it ended in tuberculosis? Do we ask if anything in the inherent conditions of that tabetic, or any one of his surroundings, has been able to produce or favor the genesis of intercurrent affections? It is in proceeding, otherwise it is in making a minute inquiry, *apropos* to each of your patients, that, gentlemen, you will perhaps become contagionists, as I became long since, thanks to the instruction of my preceptor, Prof. Villemin. I was able to follow, in that regard, in 1879, in this same service of the *Charity*, at No. 17 of St. Charles Ward, a patient whose history has vividly impressed me. It relates to a man of fifty-one years, entering at the begin-

ning of the year, with M. Hardy, for an organic affection of the stomach. That man was free from all other affections, his hereditary antecedents were good, his personal history was excellent; the only thing that one could notice was a little alcoholism. All, I repeat it to you, was a gastric epithelioma of small size. This patient was examined many times, and studied thoroughly in detail in M. Hardy's clinic. The epithelioma, encroaching to a small extent upon the anterior face and the great curvature of the stomach, gave rise to rare vomiting. Suffering everything, dyspeptic and emaciated as the man was, he was not cachectic, and was perishing very slowly, when he presented, at the end of May, five months after entering the hospital, signs of pulmonary tuberculosis with a rapid march, which carried him off in a few weeks. I add that this patient (other symptoms not appearing to me essential) was flanked by two phthisics. On his left, in No. 16, lay, for many months, an alcoholized cartman, attacked by fibrous tuberculosis of the left summit; on his right, in No. 18, lay a young scrofulous patient, who, after a sojourn of seven weeks in the hospital, succumbed to phthisis, worn away by a tuberculosis, principally pulmonary, with a sub-acute course. In this patient we found both summits involved, by a cavern as large as a pigeon's egg. As to the lungs of our man with the gastric epithelioma, they were stuffed in their upper lobes with miliary tubercles.

I would not draw from that observation, nor from the coincidence so common of cancer and of tuberculosis in the hospitals, more arguments than it will allow; but I must call your attention to these facts, too often left in the shade. I shall demand only what you would have thought and said, if our epitheliomatous patient had been carried off by measles, or erysipelas, in place of rapid tuberculosis? You would have sought in the contagion of these two exanthemes a determining cause of a disease whose decline from cancer would have been the occasional cause. I avow that I have thought concerning tuberculosis as you would have said of measles. I have seen in tuberculosis a disease which "came in to finish another," that reasonably I have held this for a long time, *apropos* tabetic and gastric patients, etc., neophthisical whom I have thought took on the condition of tuberculous contamination at the hospital!

Do you comprehend now, gentlemen, why I maintain

that, far from shunning the study of contagion, the physician ought expressly to occupy himself concerning that question, about which to keep silence is worse than a fault? We ought to seek the truth, and if we present it we ought not to cry it from the housetops; but by inspiring our conduct and conforming our practice, make the patients who surround us prosper, make it enter into the counsel of those who, under divers titles, have charge of public health. Think, gentlemen, that tuberculosis, at the commencement of this century, caused one-tenth, that now it causes one-fifth of the general mortality of France.

BOOK NOTICES.

A SYSTEM OF SURGERY; PATHOLOGICAL, DIAGNOSTIC, THERAPEUTIC AND OPERATIVE. By Samuel D. Gross, M. D., LL. D., D. C. L. OXON., LL. D. CANTAB., Emeritus Professor of Surgery in the Jefferson Medical College. Illustrated by upward of 1,600 engravings. Sixth edition, thoroughly revised and greatly improved. In two volumes. Large 8vo. Pages 1,194 and 1,174. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: R. Clarke & Co.

This great work, by Prof. Gross, is undoubtedly the most magnificent work upon surgery in the English language. So far from being a mere compilation, like very many works, it embodies the fruits of the labor of one possessing superior intellectual powers, strengthened and cultured by learning, and who has had more than half a century's experience in private and public practice, that has brought to his attention the very many thousand patients possible to be brought under the notice of one in that great length of time. Add to this the results of the diligent and extensive research of many years of the experience of all the great surgeons, as set forth in contemporaneous literature, comparing the observations of one with those of another, and making such deductions as would follow. It is a treatise upon surgery that is really encyclopedic in its character, as regards fully treating every topic of the science, and minutely detailing all that is known in regard to it.

Prof. Gross expresses pleasure at the great strides surgery has made in the last fifteen years. Much of this

progress is unquestionably due, he says, to the foundation which Dr. Ephraim McDowell unconsciously laid, when in December, 1809, he performed his first operation for the removal of a diseased ovary. To that operation Prof. Gross proceeds to state, in the bold hands of the two Atlees, Clay, Wells, Kimball, Dunlap, Keith, Pean, Schroeder, Koeberle, Thomas, and others, are directly due the brilliant advances which have been made in abdominal and pelvic surgery during his time. Prof. Gross then mentions Lister and others, who, by their discoveries of new methods of operating, have contributed greatly to the advancement of surgery; but while we would join him in bestowing the meed of praise on every one to whom it is due, we consider that he himself is second to but few in his contributions to the progress of surgery. There is scarcely a department to which he has not either added something, or elucidated better than which was already known. Without stopping to record actual discoveries, we can truly say that his learning, experience, and research, more than that of almost any other great surgeon, has elevated surgery to the high pinnacle which it has attained.

In the sixth edition of this great work, every chapter has been thoroughly revised, many portions have been entirely rewritten, and a large amount of new matter has been introduced, in order to place the work fully abreast of the existing state of our knowledge. We presume, on account of the great age of the author, that it is not probable it will ever be revised again by him; but so near perfection does it seem that surgery has attained, as evidenced by the expressions of such surgeons as ———, it will be no little while before one will be needed. Mechanical surgery certainly can not have much added to it in the way of improvement, and the microscope, with its almost perfected lenses, has been so diligently employed in the last decade in investigations, that it would seem there was nothing more to be discovered in pathology. But it is not safe for any one to attempt to limit the possible.

THE PRINCIPLES AND PRACTICE OF SURGERY. By John Arkhurst, Jr., M.D., Professor of Clinical Surgery in the University of Pennsylvania, etc. Third edition, enlarged and thoroughly revised, with 555 illustrations.

8vo. Pages 1,064. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: R. Clarke & Co.

This work has had its merits proven by a demand for a third edition. Not half so large as the great work of Prof. Gross, it is as full as its purposes require. It treats, in a very thorough and satisfactory manner, all the subjects in the various departments of surgery. The medical student and general practitioner of medicine will find it admirably adapted to their wants—the former as a text-book, the latter as a most valuable work of reference, when he wishes to refresh his mind and obtain the latest information on any subject of surgery. While there are no omissions or abridgments of any descriptions or discussions essential for imparting a thorough knowledge of any principle or practice, yet unnecessary details and lengthy statements of views of various writers, although they may be interesting to the specialist, are excluded. The student and general practitioner want *facts*, and, as much as possible, *facts only*, and every word written beyond what is necessary to impart a full and satisfactory knowledge of them only taxes the time and obscures the elucidation of them.

In revising his work for a third edition the author has spared no pains to render it worthy of a continuance of the favor with which it has heretofore been received. We predict an increasing demand for the work.

THE PHARMACOPŒIA OF THE UNITED STATES OF AMERICA. Sixth Decennial Revision. By authority of the National Convention of Revising the Pharmacopœia, held at Washington, A. D., 1880. 8vo. Pages 488. New York: Wm. Wood & Co.

In accordance with the call of Dr. James M. Morgan, the Assistant Secretary and last surviving officer of the Convention of 1870, the Convention for the Sixth Decennial Revision of the Pharmacopœia of the United States of America met in the National Medical College, in Washington, D. C., on May 5, 1880, at 12 M.

After spending two or three days in discussion in regard to the plan of the new pharmacopœia, the improvements that were necessary to be introduced, etc., the Convention appointed a Committee of twenty-five members, entitled, a "Committee of Revision and Publication of the Pharmacopœia of the United States of America,"

to revise the pharmacopœia and publish it. This Committee of Revision held two meetings in Washington before separating. In September, 1880, they met again. At other times, both previously and subsequently, interchanges of opinions were accomplished by circulars. The work before us, which is just published, is the result of their labors, forming the Pharmacopœia of 1880, and which will be official until 1890.

The new pharmacopœia, in so far as modifications have been made, will make necessary a revision of all the Dispensatories. Physicians and druggists, however, who have recently purchased costly Dispensatories, need only to purchase the new pharmacopœia to be posted as to changes.

We have space to mention only a few changes. Seventy-eight crude drugs have been dismissed from the official ones; twenty-eight inorganic drugs or chemicals; one hundred and six pharmaceutical preparations; and seventeen miscellaneous substances. There have been introduced thirty crude drugs; sixty inorganic drugs or chemicals; one hundred and fifty pharmaceutical preparations, and sixteen miscellaneous substances. A new base for ointments has been introduced, derived from petroleum, entitled, *Petrolatum*, with a minimum and maximum melting point.

The Latin names of alkaloids have been made to terminate in *ina*, and the corresponding English names in *ine*; the latter termination being at present preferred, in modern chemical language, to the termination, *ia*. The so-called neutral principles have received the termination, *inum*; English, *in*. Examples (*Alkaloids*): morphina, morphine; quina, quinine. (*Neutral Principles*): picrotoxinum, picrotoxin; santoninum, santonin.

The gender of the Latin nouns of salts, in *as* and *is*, has been changed back to the masculine, it previously having been feminine. We also notice the following changes: *chirata*, *asafetida*, *cambogia*, for *chiretta*, *assafœtida*, *gambogia*; *lupulinum*, for *lupulina*; *glycerinum*, for *glycerina*; *pyroxylinum*, for *pyroxylon*; *manganum*, *bromum*, *chlorum*, and *iodum*, for *manganesium*, *brominium*, *chlorinium*, and *iodinium*, etc.

It is our opinion that some of the changes in nomenclature will not be adopted by the profession, and that the old names will be restored in 1890. We regret that

the Committee did not abandon the use of diphthongs in the orthography of medicines; for instance, spell *asafetida*, *asafetida*. Diphthongs are being abandoned by writers generally, and especially medical writers.

SLIGHT AILMENTS: THEIR NATURE AND TREATMENT. By Lionel S. Beale, M. B., F. R. S. Second edition, enlarged and illustrated. 8vo. Pages, 283. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price, cloth, \$1.25; paper, 75 cents.

The fact that Prof. Lionel S. Beale is the author of a work is a sufficient guarantee that it is of value. It would not be considered possible that one of great learning as he is, and profound investigator, and who is the author of numerous works of acknowledged high order, could be the author of a work of inferior merit. An examination of the present work shows that it is one containing a large amount of valuable information—information of practical importance. Although the ailments of which it treats are denominated slight, yet they assume no little importance when they come to be treated. The knowledge that is available in regard to not a few of them is meager, and the practitioner, consequently, oftentimes, has no little trouble in managing them—far more frequently than happens with grave affections. What physician is there who has not met with cases of neuralgia and rheumatism that he would not rather treat than a score of cases of pneumonia, or half a dozen cases of typhoid fever, than one of them?

Among the number of "slight ailments treated are constipation, diarrhea, intestinal worms, vertigo, giddiness, biliousness, sick headache, neuralgia, rheumatism, the feverish and inflammatory state, actual changes in fever and inflammation, common forms of slight inflammation.

We have no doubt but that the work will meet with a large sale.

MEDICAL ELECTRICITY. A Practical Treatise on the Applications of Electricity to Medicine and Surgery. By Roberts Bartholow, A. M., M. D., LL. D., Professor in Jefferson Medical College. Second edition, enlarged and improved. 8vo. Pages, 291. Philadelphia: Henry C. Lea's Son & Co. Cincinnati: R. Clarke & Co.

The first edition of this work having been exhausted in less than a year, shows the great value in which it has been held by the profession. Only a work of unusually great merit could have met with such a rapid sale. The subject treated is not one to which writers have not given attention; and, therefore, there being no other works upon it, this one would be sought for in consequence of there being no other one that could be consulted. On the contrary, there are quite a number of treatises on medical electricity, some of them quite large and exhaustive, by eminent gentlemen of the profession, who have given it special attention. The intrinsic worth of the work alone has created the great demand for it which has been manifested. It has been found to fill a want, notwithstanding having numerous competitors. It was the purpose of the author to prepare a work from the practitioner's, rather than the merely scientific standpoint; and this he has certainly accomplished.

In the second edition the same conception has been maintained which was paramount in the first; and at the same time there is developed more fully the modern methods of ascertaining and expressing current strength, tension, resistance, etc. Beside an increase in the number of lines to the page, and the condensation of the matter, new and old, the work has been enlarged by the addition of thirty pages.

A PRACTICAL LABORATORY COURSE IN MEDICAL CHEMISTRY.

By John C. Draper, M.D., LL.D. Pages, 71. New York: William Wood & Co. Cincinnati: R. Clarke & Co.

This is a small work on the subject mentioned upon the title page, of the style of small singing works—the pages less in height than width, and opening in direction of its length. It has as many leaves as pages, as the leaves are printed only on one side.

It gives brief directions for the detection of poisons, organic and inorganic; also for analyzing the various animal fluids, as wines, milk, etc.; also for the examination of sediments and calculi.

Students and physicians will find it a highly convenient little work.

EDITORIAL.

THE DISTINGUISHED PHYSIOLOGIST, DR. W. B. CARPENTER, AS A PREACHER.—Every physician and medical student in this country knows of the very eminent English physiologist, Dr. Wm.*B. Carpenter. His works on human physiology, and comparative physiology, and on microscopy, have been text-books in medical colleges of the United States for thirty years or longer. As an observer and thinker, no one has a higher standing in the profession in the world than he. At the present time he is visiting this country, and we hope to have the pleasure of meeting him. We feel sure that there is no physician on this side of the Atlantic who would not rather see Dr. Carpenter than any one of the high-born of Europe.

Although we knew that Dr. Carpenter was a man of versatile talent, yet we were not aware that he ever acted the preacher, but it seems that such is the fact. From a recent newspaper, we learn that, on a Sunday, he occupied the pulpit of a Unitarian Church in Providence and preached from the two texts: "Prove all things; hold fast that which is good;" and the injunction of Paul to Timothy to avoid vain babblings and opposition of science so-called. He then described law as evidence in the regularity of natural phenomena, so far as he understood them, and next described the force or energy which kept everything in accurate motion. But whence this energy? He did not regard it as sufficient to reply like some, "The laws of nature," for these laws are simply generalizations of facts and have no coercive effect. We go back from force to force and have still to ask, whence the final force? He added:

"We have, in our own consciousness of personal energy, the fundamental idea of force, and I believe that it is in this fundamental idea of personal energy that our own conceptions of causation are based; and I think that the best scientific thought of all schools is coming nearer and nearer to that rule. The great doctrine of evolution we see is merely the expression of the mode of operation of one continuous energy. There must have been a beginning to that evolution. The very name implies a beginning. Accepting, as I do, the history of evolution of the organic as well as of the physical forces, it comes to this

that there is a continuous energy that sustains and regulates the whole. The whole doctrine is simply the expression of a uniformity of cause.

"We can get no higher than that, and there theology comes in. Theology takes up this universal force and energy, and develops it in connection with these thoughts and feelings of our own higher nature, which lead us not only to the conception of a first great cause, but of one that is in sympathy with the wants and the yearnings of the human spirit, and places itself in direct relations with us. The highest conception we can take of the doctrine of evolution, is simply the tribute we pay to the grandeur, the wisdom and the power that planned out that evolution without a check and without a break."

DR. CARPENTER then led the congregation in the Lord's prayer, and gave out the hymn beginning:

Lord of all being, throned afar,
Thy glory flames from sun to star;
Center and soul of every sphere,
Yet to each loving heart how dear.

The services were thus brought to a close.

D. Carpenter is a son of the late LAMB CARPENTER, D. D., eminent in the ranks of English Unitarianism half a century ago. He is also a brother of the late MARY CARPENTER, the female apostle of prison reforms, and the friend of the sick and suffering everywhere. He comes of a good stock, and his Providence effort shows that acquaintance with the laws of nature does not involve a repudiation of all beliefs that are not explainable by terrestrial phenomena. Considering his religious connection, it is somewhat surprising to us he is not a homeopathist, for we can not call to our mind a Unitarian who is not a homeopathist. Roman Catholics, however, Presbyterians, Orthodox Jews, Hardshell Baptists, Oldschool Methodists, Orthodox Congregationalists, are nearly always of the Old School in Medicine, or *Regulars*.

THE NEW YORK CONTROVERSY.—The contest in New York for and against the recognition of homeopathic practitioners of medicine seems to continue unabated. Not a few of the most eminent physicians of the city of New York, and of the State, urge the breaking down of all obstacles in the way of consulting with homeopathists. They profess to be as much opposed as any one to the recognition of all quackery, and especially quack doctors;

but claim that a legally constituted physician, who has been regularly educated, is a cultured gentleman, a man of learning and scientific attainments, is not a quack, even though he style himself a *homeopathist*; but that he is a quack, though he style himself a *regular physician*, who is ignorant, has no learning or culture, is boorish in his manners, and unprincipled in his conduct toward other practitioners. Somelengthy and quite plausible articles by these gentlemen have appeared in the pages of the *Medical Record*.

Undoubtedly there has been a tendency on both sides to obliterate all dividing lines. A couple of years ago a certain homeopathic society passed resolutions denying that "*similia similibus curantur*" was a cardinal doctrine to be observed by them, and to govern in all cases in the treatment of disease, while *regular physicians* have for some time indignantly cast off the name of allopathists, and claim to observe in practice no set rules or dogmas, but to treat diseases rationally, submitting everything to the test of experience. With no prejudices against small doses, even willing to tolerate infinitesimal ones, if experience should prove that benefit would result in any case from them, the objection to homeopathists at present consists in the profession of possessing a system of curing peculiar to themselves, when the fact is there is not anything in homeopathy that a regular physician could not make use of, if he thought it possessed any merit and was worth adopting. As Dr. Cathell says in his little work, "homeopathy would have been absorbed into rational scientific medicine before we were born *if* there had been anything in it worthy of absorption."

But, beyond a doubt, there are not a few physicians who have gotten into the homeopathic fraternity, and seem to be kept there by force of circumstances, who are as *regular* in their treatment of diseases as any regular physician. Some of these are probably dishonest men, who hold on to the name of homeopathist in order to make money; but there are others of them whom we can not look on in that light. Having graduated, perhaps, in a homeopathic school, and the name homeopathist attached to them in consequence, they seem compelled to wear it, although they do not believe in homeopathic dogmas nor practice them, nor give out to the world that they do. They quietly practice the profession of medicine to the best of

their ability, impressing every one as being courteous, educated gentlemen, and contrasting most favorably with many coarse, boasting, tricky, ignorant doctors who call themselves *regular* physicians. We have in our mind a gentleman of this city, who is considered a homeopathic physician, although he has no sign on his house announcing him as such, nor is classed among homeopathsists in the Directory of Physicians, Druggists, and Dentists, and who has a very large and lucrative practice—numbering among his patrons many of the wealthiest and most influential families of the city. While he seems to attend sedulously to his own business, we have heard from those who have had opportunities of knowing, that, in the way of obtaining full information in regard to the diseases of his patients, in order to treat them intelligently, he has more specimens of morbid secretions and excretions sent to such expert chemists and microscopists as Prof. Wayne for analysis, than a score or more of other physicians do. To what extent his large practice is due to this care in investigating the diseases of his patients, in order to better treat them, we will not venture to say. It is but reasonable to presume, that, having obtained a thorough knowledge of a case, and then treated it in a *rational* manner, the result would be better than if the treatment had been founded upon an imperfect acquaintance of the case; and his reputation added to in consequence.

Our acquaintance with homeopathic physicians is very limited. With the dogmas of the school we have no sympathy; yet we do not believe that all the quacks are homeopathsists. It is a melancholy fact that there is a large number of men who call themselves regular physicians, having diplomas, and are members of medical societies, who are coarse, ignorant, and unprincipled, and will stoop to any meanness to steal a patient from an honorable physician. To fraternize with such is repugnant to every feeling. The unfavorable contrast that such make with many called homeopathsists, but who are not tied to infinitesimal doses, and do not hesitate to openly reject the dogma of "*similia similibus curantur*," has no doubt had much influence upon a number of eminent New York physicians, in desiring to break down all barriers of recognition of all legally qualified medical practitioners. It has probably occurred to them that if one physician is to be denounced as a quack because it is supposed he

holds to particular dogmas, why should not also an ignorant pretender, who is as deficient in morals as he is in knowledge? Dishonesty ought to be as much an offense in one class of dishonest acts as in another.

At the present, the gentlemen of the New York State Medical Society, in favor of recognizing homeopaths, are in the minority. We believe, however, that the agitation of the question will be productive of good, tending to elevate the standard of the profession, and spreading more correct notions of what constitutes a really regular physician—that it is not all in the name as some seem to suppose.

CLINICAL THERMOMETERS.—Dr. Edward R. Squibb published in the second number of *Ephemeris*, an excellent article on Clinical Thermometers, which has hardly attracted the notice which it deserves. The clinical thermometer has always been supposed to be an instrument of precision, but that this is not so, probably more than one medical man has found to his sorrow, when he has relied upon it in making his diagnosis. No doubt many can remember the time when they have been frightened at the high temperature registered, and have either ceased to put reliance in thermometric diagnosis, or have tested their thermometer and found it one, two, or even three degrees out of the way. A good instrument is very valuable, but, as Dr. Squibb says, a poor one is an abomination and a fraud. It is certainly odd that after so many years that they have been in daily use, that, as a rule, physicians have hardly suspected that a thermometer (at least a good looking one) could testify falsely.

Dr. Squibb tells us how to select a trustworthy instrument, and this without regard to its appearance or price, both of which are so deceptive. Errors may arise from imperfect tubes or from careless construction, but the most important source of error lies in the fact that for three years the glass continues to contract, so that the most carefully made thermometer may soon become useless, unless it has been properly "seasoned" before being graduated. This contraction of the glass continues for about six years, but the error for the last three is so small that it may be neglected. An old instrument, the error of which is known, is of great value, as it may be used to determine the errors in others.

On the thickness of the glass will depend the sensitiveness of the thermometer. If the glass is too thick, then it will register too slowly, and time will be lost; if too thin, it will be easily broken. Therefore, test your thermometer, and by experiment determine the shortest time that is required for it to attain its highest reading. This ought to be reached, on the average, in from six to eight minutes. See that the register does not shake down too easily, for many a thermometer has been destroyed by the rough shaking of an easily moving register.

Get an instrument which can be read easily. Finally, slowly and carefully heat the thermometer in warm water until the column of mercury is within one or two degrees of the top. If, on cooling, the mercury is pushed down, there is too much air in the tube, and the instrument must be discarded.

Do not buy a thermometer unless with it there be a certificate from either the Yale or Kew Observatory stating the variations from the normal standard. The older the certificate the better. Even after every precaution, it is better to verify the correctness of the thermometer in daily use every few months.—*San Francisco Western Lancet*.

THE NEW PHARMACOPŒIA.—It will be seen by referring to the department of "*Book Notices*" that the new pharmacopœia has just been issued. It is of larger size than the previous one, and an examination of it shows that a number of changes have been made in various respects—a few of them, it will be observed, we have noticed in noticing the book. In *nomenclature* there are some modifications; as, for instance, the Latin names of alkaloids are made to terminate in *ina*, so that morphia hereafter should be written *morphina*. It will thus more nearly correspond with the English name, morphine. Also *quinina* should be written instead of *quinia*. *Aqua chlorinii* is changed to *aqua chlori*; *arsenici iodidum* to *arsenii iodidum*; *pilulæ hydrargyri* to *massa hydrargyri*; *manganesium* to *manganum*; and many others.

The most important changes are the changes in the strength of preparations. There are about seventy-five of these noted on pages 454 and 455. We have space to mention only a very few. We will premise by stating that the comparison of strengths between the pharmacopœias of

1870 and 1880 is made by the number of parts of active constituent in 100 parts by weight of the preparation. In 1870, the following preparations had the following number of parts of active principle: Tr. aconite, 47.6; tr. opium, 9; tr. valerian, 15; tr. asafetida, 16; tr. cinchona, 25; tr. cannabis, 36. In 1880, these same preparations are directed to be with parts as follows: Tr. aconite, 40; tr. opium, 10; tr. valerian, 20; tr. asafetida, 20; tr. cinchona, 20; tr. cannabis, 20.

We do not know why these changes were made unless it was to compel physicians and druggists to buy the book. Changing the formula of such a preparation as tr. opium, we regard as a very serious matter, especially if made stronger, and should not be ventured upon except for most urgent reasons.

THE CALAMITY IN THE SEGUIN FAMILY.—On a recent morning the public were startled with the dreadful announcement that the lovely wife of Dr. E. C. Seguin, of New York, had, in a fit of temporary insanity, shot all of her little children—three in number—and afterwards herself. She had taken them to an upper room, tied their hands behind their backs, and then, under the pretext of playing “blind man’s buff,” first killed the eldest, a beautiful boy of six years, then two sweet little girls, aged respectively five and four years, and evidently in an instant afterward took her own life. When found in the evening, some time after the commission of the deed, all were dead. The lady was of a most lovable disposition, had been devoted to her husband and family, and had shown no symptoms of insanity except occasional attacks of melancholia, for which she could not account, and which she bravely endeavored to overcome. Her devoted husband, with an affectionate concern for her condition, had arranged to have her accompany him on a pleasure trip the next day; but he came home in the evening to find himself suddenly deprived of his entire family. A greater calamity could not befall any one, and coming thus upon Dr. Seguin, calls forth the deepest and most heartfelt sympathy of his many friends. May he have the strength to bear this terrible affliction.

TOPICAL APPLICATION OF ALCOHOL.—In cases of polypous growths or granulations in the meatus of the ear, in the

cavity or on membrane of the tympanum, Politzer recommends alcohol very highly. Before employing it, it is essential to force out the purulent secretion from the cavity of the tympanum by means of air forced in by the Politzer apparatus and by syringing with tepid water. He speaks of it in the highest terms, and cites some cases as proof of the great efficacy of alcohol as a means, not only of removing these growths, but also of preventing their reappearance after various caustic solutions have been used in vain for this purpose. He directs that the alcohol, moderately warmed, be poured into the ear by a spoon, and permitted to remain from 10 to 15 minutes. Generally it causes only a sense of warmth. If severe pain, with a burning sensation, is produced, it should be diluted with an equal part of distilled water. It has proved wonderfully serviceable in diffused growths from the mucous membrane of the middle ear. In some such cases it must be continued for weeks or months.

FATAL CHLOROFORM ANÆSTHESIA.—A death occurred in Baltimore on the 15th ult. from this cause. A robust man, aged 49, and weighing about 200, employed in a foundry, had a dislocation of the proximal phalanx of the ring finger. About one drachm of Squibb's chloroform was administered on a towel folded, with the end open. Reduction was effected with ease, but during the anæsthesia the man sat up and struck violently at the physicians. He was laid down again, and immediately after was found to be dead. The whole thing occupied but three minutes. Auscultation revealed nothing wrong with the heart. The habits were very dissipated. No *post-mortem*.—*Maryland Medical Journal*.

DR. J. J. WOODWARD, U. S. Army, has returned from Europe, and the profession will regret to learn that his health has not been improved by his trip.

WE are requested to announce that a physician desires to dispose of the sixth, or last edition of Gross' Surgery which has just been published. Bound in half Russia. Will take 25 per cent. less than catalogue price. Address MEDICAL NEWS.

THE CINCINNATI MEDICAL NEWS.

VOL. XV. No. 180.
Old Series.

DECEMBER, 1882.

VOL. XI. No. 12.
New Series.

ORIGINAL CONTRIBUTIONS.

A Case of Chronic Pyo-Thorax.

BY E. A. COBLEIGH, M. D.

HAVING met the following case in my practice, and having had it under observation for the past six years, I deem it of sufficient interest, owing to the length of time that the pathological condition has hung on, to be worthy of record in our professional literature.

In the spring of 1871 two blacksmiths of this town got into a drunken fight, during which rencounter one of them, Geo. F., received a stab from a pocket-knife in the left thorax, about half-way between the axillary border and the sternum, between the fifth and sixth ribs. The stab penetrated into the pleural cavity, and wounded one of the intercostal vessels, so that hemorrhage was considerable, but was finally controlled. It was thought, at the time, that none of the inter-thoracic structures were injured, other than as already mentioned, and the wound was treated for securing primary adhesion. Union by first intention resulted, with no marked symptoms of internal mischief. But in a brief time indications of pleural inflammation set in, followed by perforation of pus through site of original wound, and free flow for some months, with relief of suffering and other urgent symptoms. He was treated now in turn by several practitioners, but no measures for drainage nor surgical steps of any kind were resorted to, and he seemed to derive no benefit from treatment, other than tonics which sustained him. He ceased his debauchery, however, and lived a sober life ever afterwards.

Being rather a shiftless, trifling sort of a fellow, and no prospect of reward for their services, the local physicians gradually abandoned him to his fate. He lingered along until another spontaneous opening occurred in the chest wall, lower down, when the first one closed up permanently. He got able to work some, doctored himself and did fairly well, though reduced to a mere skeleton, considerably stooped from pain and debility, and an object of aversion to those around him, owing to the disgusting odor of his purulent discharge, which nothing seemed to mitigate in the least.

In this condition Mr. F. has now continued for over eleven years, most of the time able to "knock about" and do light labor, sometimes seemingly at the verge of the grave and utterly helpless. When the discharge is free (and frequently it is several pints per diem), he is comfortable; when obstructed, he suffers excruciating pain. On several occasions the external openings have closed up by healing of themselves, remaining closed for two or three days and then bursting open again, or new fistulous tracks forming elsewhere and drainage resulting through them. Two or three times paracentesis has been performed with the thumb lancet in intercostal bulging sacks of purulent collection, and these have formed more or less permanent fistulæ. So that now nearly the whole left and anterior pectoral region, from the third rib downwards, nearly extending to the sternocostal articulations, is a vast cicatricial structure from scars of past fistules. Several times copious internal hemorrhage has occurred, finding vent with the normal pus discharge, and continuing recurrently for days at a time. Often this blood coagulates in the lower part of pleural sack, and occludes the patent outlets, causing new ones to burst open higher up. When these hemorrhages are profuse he suffers great pain, and severe shock and debility, but does much better when the blood finds free escape externally than when it accumulates within. In addition to these superficial discharges of blood and pus, on several occasions an outlet has been found by the pent-up fluids through the lung substance and bronchial tubes. For several years he has suffered constantly from bronchitis, and more or less muco-purulent discharge from this source. Of course he has, at times, labored under attacks of dyspepsia, and his bowels are obstinately constipated always;

but aside from the troubles narrated above, he may be said to possess very fair health.

About two years ago he was confined in our county jail on the charge of highway robbery, and remained therein, awaiting his trial, and passing his time in mending shoes, for about six months. The confinement told heavily on his already impaired strength; he emaciated to skin and bones; his cough became distressing, and every indication pointed to a speedy death. As county physician I advised his liberation, and I informed the court frankly that I thought he would not live much longer, as he was then confined to bed. His case was therefore *nolled*, and he was sent home to his cabin to pass his last days in peace. He had no further treatment except as he resorted to remedies to suit himself, slowly improved, and is to-day looking better and feeling better than for years, and bids fair to live a reasonably long time yet. He is now cutting and hauling cord-wood to town for a living.

To have attempted any scientific treatment of this patient would have been mere folly, for the man is a "knowing" sort of a fellow, and would not have submitted kindly and patiently to any irksome course of regular attention to his case. During his affliction he has tried all sorts of remedial experiments on himself, and many of them of his own concocting. But his three mainstays have been tr. iron in enormous quantities, ergot for his hemorrhages, and pills of pine resin, fresh from the tree, whenever he felt a little "out of sorts" from any cause. Taken as a whole, I think the case one of great interest pathologically, and calculated to show a tremendous resisting power to the causes of dissolution in some people. Such a tenacious vitality does not often continue for so long a time under such adverse and complicating circumstances.

The Medico-Legal Relations of Chronic Alcoholism; Its Pathological Aspects.

Read before the Massachusetts Medico-Legal Society, June 13, 1882.

BY G. K. SABINE, M. D.

ALTHOUGH the acute form of alcoholic poisoning is not unfrequently the immediate cause of death, and the

chronic alone rarely so, the two are often combined so that the signs of the latter should be familiar to the medical examiner.

Of all the various conditions that are attributed to the habitual use of alcohol, but very few, if any, are pathognomonic. The statements of different observers vary greatly in regard to the post-mortem appearances of the chronic as well as of the acute form, and the question to what degree certain diseases may be attributed to this form of poisoning remains an open one. In fact, almost every known chronic affection has been attributed some time or other to the intemperate use of alcohol. It is probably the fact that the remote is frequently looked upon as the immediate cause. That the habitual and long-continued use of alcohol so alters the tissues and impairs their functions that they are more prone to become diseased there can be no doubt.

Perhaps there is no question which the medical examiner is more frequently called upon to decide than whether or not he has to deal with a subject who has been an habitual drunkard.

Although no single pathological condition is sufficient to determine this positively, yet there are certain ones which point strongly in this direction, and the same inference can be drawn from others taken collectively which are almost equally conclusive.

Among the various pathological conditions resulting from chronic alcoholism are the following:

CHANGES IN THE SKIN.

In the earlier stages of this affection the skin is remarkably smooth and soft, owing to an increase in the fatty tissue. According to Frerichs, the secretion contains a larger amount of oil than normal, a condition similar to that which exists when cod liver oil is taken in large doses for some length of time. Later on the skin becomes dry, and on the extremities hard and inelastic.

Acne rosacea, consisting of an inflammation and even suppuration of the sebaceous glands, is among the characteristic symptoms of the intemperate use of alcohol. The nose and face are its favorite seat. Besides the nodules, the skin is reddened, owing to the dilated capillaries and consequent blood stasis, and is also infiltrated to a greater or less degree.

THE BLOOD.

The most striking change in the blood is an increase in the watery elements, and diminution in the fibrine. It contains much serum, forms no or only very small coagula, and is of a very dark color; hence the term "venous plethora," used by some of the older authors. The dark color is explained by an increase in the hydrogen and carbon (Steinheim); or by a destruction of the red blood corpuscles (C. H. Schulz), so that less oxygen is taken up and less carbonic acid given off. Another peculiarity presented by the blood is the increase of fat contained in it. It has been stated that not unfrequently the serum of blood drawn from a person suffering from delirium tremens is more or less opaque or even milky (Morgagni, Nasse), this appearance being due to an excessive amount of fat.

FATTY TISSUE.

There is a marked increase in the subcutaneous fat, in the fat between the muscles, about the different organs, especially heart, kidneys, intestine, in the greater and lesser omenta, in the mesentery, etc. In the later stages of alcoholism, when the digestion becomes impaired and the blood deteriorated, this accumulation of fat disappears. According to Rokitansky there is an increase of fat in the marrow of the bones, the bony tissue at the same time being atrophied.

In the earlier stages of the affection the increase of fat is due to an infiltration rather than to a degeneration. The fatty liver, for instance, is of essentially a different nature at this time from that met with later on in the disease.

THE STOMACH AND INTESTINE.

A chronic catarrhal condition of the stomach is quite constant, and appears early in the disease. This is indicated by abundant soft gray mucus, projections of the mucous membrane, and by the slaty color that occurs, especially near the pylorus. Another form is very apt to be met with which is characterized by circumscribed hypertrophies of the whole mucous membrane (*gastritis prolifera*), and produces little warty projections (*gastritis verrucosa*); later larger polypoid growths result (*gastritis polyposa*).

Owing to the disturbance of circulation which takes place later in other organs, the return of blood from the stomach is interfered with, so that a varicose condition of some of the veins is produced.

The hypertrophy is very apt to be accompanied by dilatation of the glands, due to compression at their outlet, so that small cysts which are filled with a clear fluid and project from the surface, result. According to Klebs, an inflammation of the submucous tissue may be produced by the excessive use of alcohol, and this go on to suppuration, or it may result in the formation of large masses of connective tissue without destruction of the mucous membrane. In this manner it occurs at the pyloric extremity, producing stenosis.

The continued irritation of the diseased mucous membrane is productive of a variety of ulcerations, from the small hæmorrhagic erosion, characterized by a superficial loss of substance, to the so-called round or perforating ulcer.

According to Erbstein, after administering large quantities of dilute alcohol to dogs for three or four days, the peptic and ordinary gland cells of the stomach are found cloudy and granular. The lumen of the pyloric glands is plugged by a finely granular, yellowish or yellowish-brown mass. In extreme cases fat drops appear in the altered cells. In most cases chronic alcoholism produces no marked effect on the intestine, although in many a chronic catarrh exists.

THE LIVER.

The liver is the first and the most severely affected by the abuse of alcohol of any organ in the body. The alcohol, being taken up by the portal system, is carried directly to this organ, and there, by its irritating effect, produces various disorders according to the individual's condition, and more especially the character of the alcohol. The more concentrated the alcohol the sooner and the more severely is the liver affected. Beer and wine seldom affect the liver, and are almost never productive of severe forms of degeneration. The most frequent affections of the liver produced by chronic alcoholism are simple fatty infiltration, inflammation of the parenchyma, and fatty degeneration of the same; and, lastly, inflammation and hyperplasia of the interstitial connective tissue.

Among the causes of fatty liver the abuse of alcohol is one of the most prominent. According to Frerichs it ranks only second, chronic disease of the lungs standing at the head of the list. He says: "Of thirteen individuals who died of delirium tremens, in six the liver was very fatty, in three the organ contained little fat, and in two none at all; lastly, two died of cirrhosis of the liver." It is probable, but not absolutely certain, that the alcohol acts by retarding the metamorphosis of tissue, and the blood, being overcharged with fat, deposits it in this organ.

"In higher grades the liver is enlarged, but usually appears flattened, the edges are generally thickened and rounded off. The peritoneal covering of the liver is transparent, smooth and shining. According to the grade of fatty infiltration, the surface of the liver is yellowish red or distinctly yellow. The consistence of the organ is diminished; it feels doughy, and pits on pressure with the finger. On incision we meet little resistance; a coating of fat remains on the warmed knife blade. The cells in the periphery of the acini first become infiltrated, and later on those nearer the center." The quantity of blood in the capillaries is diminished in proportion to the amount of infiltration. On microscopic examination, according to the grade of the disease, the enlarged or usually rounded liver-cells appear filled with fine fat globules, or those have united to form single larger drops, or, lastly, individual liver-cells are entirely or mostly filled by one large drop of fat.

Fatty or granular degeneration of the liver is attributed to the abuse of alcohol by Baer, who quotes Klebs in so doing. The reason why the latter assigns this as a cause is perhaps owing to the fact that he makes a somewhat different classification of the diseases of the liver, considering certain forms as degeneration which are looked upon by other authorities as simply infiltration. According to him the direct action of other toxic substances upon the liver, such as hydrocyanic acid, carbonous oxide, phosphorus, arsenic, and antimony produce this degeneration. Among the organic substances alcohol, ether, and chloroform hold an important position.

INTERSTITIAL HEPATITIS. CIRRHOSIS OF THE LIVER.

The most common cause of this form of interstitial hepatitis, which extends uniformly over the whole organ,

is usually considered to be the intemperate use of alcohol, still this is not necessary; most drunkards do not have a cirrhotic, but a fatty liver, and many persons with cirrhosis are not in the habit of dram drinking. Certainly cirrhosis is so commonly the result of the abuse of alcohol that when met with the cause may fairly be suspected. Frerichs speaks of it as "the chief cause."

Birch-Hirschfeld says that it is doubtful if cirrhosis is ever due to any other cause. The volume of the liver is increased or diminished according to the stage of the process. It is only accidentally met with in the early stages. The principal change produced in the liver consists in an increase of the interlobular tissue, and the appearance of small grayish masses at the periphery of the lobules. The consistency of the liver is increased. The cause of this change consists of a growth of granulation tissue from Glisson's capsule, from which small projections extend into the acini. In the later stages of chronic interstitial inflammation the liver is more or less diminished in size, in rare cases fully one-half; its surface is uneven and covered with prominences, which vary from a millet grain in size to that of a pea, and are usually of a yellow, icteric color. At the edge of the liver, especially in front where it is sharp, single nodules are frequently found, completely isolated, as the capsule belonging to the two surfaces comes in contact here. Upon section a similar condition of things is seen in the interior of the organ.

ORGANS OF RESPIRATION.

Drunkards are very subject to catarrh of the larynx, which is often accompanied by a similar condition of the pharynx. This catarrhal inflammation of the larynx not unfrequently extends into the bronchi.

A very important question is whether the habitual use of alcohol predisposes to disease of the lungs. Upon this point authorities differ so widely that it is quite impossible to draw any conclusion.

THE HEART.

In habitual drunkards the heart is almost always found hypertrophied. This hypertrophy may be brought about in various ways. As is well known, the effect of alcohol is to increase the frequency and force of the pulse.

Whenever a muscle is called upon to do an extra amount of work, the effect is to increase the size of that muscle. This hypertrophy of the ventricular walls, which is simply the result of an increased amount of work, is also produced by various obstructions to the circulation which the heart has to overcome. Owing to the deposit of fat in and about the different organs, to the fatty infiltration of the cardiac muscle itself, the work of the heart is increased. This will also be caused by the disturbance of the pulmonary circulation, owing to bronchial catarrh, emphysema, etc., and also to disturbance of the portal circulation from fatty liver, cirrhosis, etc. Another very important factor in the cause of hypertrophy of the cardiac muscle, and especially of the left ventricle, is, according to some authorities, the condition of the kidneys frequently met with in chronic alcoholism. Here one may find fatty degeneration of the parenchyma, accompanied by an increase of interstitial connective tissue which has become more or less shrunken. According to Traube, this contraction cuts off a large number of small vessels, and results in an increase of pressure in the aortic system, producing dilatation and hypertrophy of the left ventricle. This explanation is objected to by others, for instance Bamberger. Still another obstruction to the circulation is owing to the lumen of the vessels being increased, for when this occurs the blood-stream is rendered slower, and has to be overcome by increased heart's action. Finally, an atheromatous condition of the arteries is to be mentioned, as this causes a decided obstruction.

In the later stages of alcoholism a fatty degeneration of the cardiac muscle occurs, and in the very last stages, owing to the general inanition at that time, the muscle becomes atrophied and diminished in weight. The organ is pale and flabby, diminished in size in all directions.

THE VESSELS.

The change in the capillaries consists in an increase in their lumen, that of the smaller and larger arteries in the so-called atheromatous degeneration. The dilatation of the small vessels and passive hyperæmia of all the organs has been explained on the ground that the alcohol has a paralyzing effect on the vaso-motor system; also that the alcohol, by its irritating effect upon the walls of the ves-

sels, causes a fatty degeneration of the same, and, as a consequence, a loss of tonicity.

Aside from the fatty condition a sclerosis of the walls takes place, owing to hyperplasia; this may result in the so-called ossification, an infiltration of lime salts into the newly formed tissue. As a result of these conditions the vessels lose their elasticity, become hard and stiff, and thus are more resistant to the flow of blood. This chronic inflammation of the walls of the vessels which underlies this process may be brought about by the continued use of alcohol. The irritation which alcohol produces in all the tissues may be sufficient to produce inflammation of the walls of the vessels. A still more important element in the causation is the constant stretching which the walls undergo and which predisposes them to the atheromatous change. Traube attributes this degeneration in alcoholism to this, and also to the diminishing of the rapidity of the blood-stream, which occurs at the same time. He says: "The most of these cases occur in drunkards. It is not unlikely that the increased tension of the aortic system which is observed in drunkards, not only while they are under the immediate influence of liquor, is owing to a contraction of the smaller arteries, which results in an increased tension by interfering with the flow of blood from the aortic system. This being the case, the increased tension observed in the larger branches would be accompanied by a slowing of the blood-stream." The primary inflammatory condition may also be brought about by the overdistention of the smaller vessels, caused by the increased heart's action. When they have once lost their tonicity, this increased action ceases. It is a well-established fact that as the quality of the blood becomes deteriorated, a condition which is a constant accompaniment of the general cachexia, the nutrition of the walls of the vessels is interfered with, and a fatty degeneration results.

AFFECTIONS OF THE URINARY ORGANS.

After each ingestion of alcohol the secretion of urine is increased, as a larger quantity of water is excreted with it.

The diseases of the kidneys which most frequently occur in drunkards, and especially in the latter stages of alcoholism, are the parenchymatous and interstitial

or granular nephritis. This latter is divided into two stages, that of infiltration of cellular elements, and the other of connective tissue formation. At first the inflammatory process produces an active hyperæmia, with an exudation of fluid and white blood corpuscles into the interstitial connective tissue. This in turn is productive of anæmia, impaired nutrition of the renal epithelium, and granular degeneration of the same.

If this process advances to another stage, there occurs either a hyperplasia of the interstitial connective tissue, or, what is more frequent, a granular condition with atrophy. The cellular elements lying between the urinary tubules become converted into masses of connective tissue, which serve to obstruct the glomeruli and tubules. The increased blood pressure in the aorta induces hypertrophy of the left ventricle, and albumen appears in large quantity in the urine, which is increased in quality, and of low specific gravity. According to all authorities, the abuse of alcohol is one of the most common causes of the granular kidney. According to Christison, three-fourths or four-fifths of all cases of granular atrophy are induced by it.

THE NERVOUS SYSTEM.

The affections of the nervous system in drunkards are both numerous and important. No organ, with exception, perhaps, of the liver, suffers so constantly and from such a variety of lesions as the central nervous system. Many alterations in the functions are recognizable after death by a change in the tissues, but there are various affections, on the other hand, which point to a marked change in the cerebro-spinal system that can not be detected. The very delicate and complicated structure of the nerves and ganglion cells require not only that their anatomical but also their chemical relations shall be preserved for the performance of their functions. Ever so slight a deviation in the nutritive processes produces a disproportionate disturbance in their functions; much greater than in any other tissues of the body.

THE BRAIN. •

The calvarium is altered. It is increased in weight by hyperostosis and sclerosis, both the outer and inner table being thickened. The cancellated structure is more

dense, owing to a concentric formation of bone about the Haversian canals. Upon the inner surface the channels of the vessels are deeper than normal as well as the depressions for the paccchionian bodies.

There is an increase in the amount of blood in the brain, owing to the abnormal action of the heart and fatty or atheromatous degeneration of the walls of the small vessels, or diminished nutrition of the same, which paralyzes them so that their lumen becomes increased, and hyperæmia results. In the earlier stages of alcoholism, where alcoholic excess is relatively frequent, this hyperæmia is more of an active process, which, in the later stages, assumes a passive character when obstruction to the circulation exists in other organs, as the liver, kidneys, lungs, etc.

CEREBRAL APOPLEXY.

An effusion of blood into the brain substance frequently occurs in drunkards. All conditions brought about by the intemperate use of alcohol which tend to produce cerebral hyperæmia favor, in a marked degree, the occurrence of either large or capillary effusions.

SEROUS APOPLEXY.

An acute or chronic serous effusion into the cavity of the skull, into the brain substance, or into the membranes of the brain, and into the cavity of the arachnoid, may result from the abuse of alcohol. This transudation occurs as a complication in other cerebral diseases, and in those troubles which tend to produce hyperæmia of this organ by mechanical stasis, as in diseases of the lungs and heart. It may also result from a very watery condition of the blood, such as occurs in Bright's disease. In alcoholism the blood is poor in plastic material, and, as a consequence, the transudation is favored. Either an acute or chronic collection of fluid in the ventricles of the brain is not an infrequent result of drunkenness.

PACHYMENINGITIS INTERNA CHRONICA.

This inflammation of the inner surface of the dura mater consists at first of a very slight layer of fibrine on the surface of the dura, from which a thin layer of connective tissue is afterwards developed, which adheres to the surface of the membrane. A second and a third

layer of inflammatory exudation is then formed, and so on until there are many layers. The dura mater thus becomes materially thickened. Each one of these layers is vascular, and occasionally one of these vessels ruptures, resulting in a hemorrhage between two of the layers. That this affection is more liable to occur in the intemperate there can be but little doubt, although it has been but seldom produced in the lower animals even after long and continued administration of alcohol.

Is Tuberculosis a Parasitic Disease?

BY GEORGE M. STERNBERG, M. D.,

Surgeon, U. S. A.

BEFORE proceeding to give an account of the results obtained in my inoculation experiments with tuberculous sputum, I beg to be indulged in a few remarks with reference to the value of photography in the study of micro-organisms. These remarks are suggested by the wood-cut (figure 6) in my last paper, which is copied from a photo-micrograph of *Bacillus anthracis* (amplification 500 diameters).

This figure illustrates very well the difficulty of reproducing a photo-micrograph satisfactorily upon wood; and, also, the fact that the value of sun-pictures of micro-organisms depends to a certain extent upon whether they are to be subjected to the scrutiny of a trained or untrained eye.

Those who are familiar with *Bacillus anthracis* from personal observation or from drawings will scarcely recognize the amorphous granules and irregular linear figures in this wood-cut, as the spores and rods of the bacillus in question. The central filament is, however, very well drawn, and it was for this especially that this photo-micrograph was selected.

It is well known that an expert microscopist, when at work, pays very little attention to extraneous objects in the field, to dust-specks on the eye-piece, etc., while a novice is very apt to have his attention particularly attracted by these things and to overlook the particular object which we desire to show him. So an art connoisseur looking at a time-worn picture is able to exclude

the fissures and stains, and to his mental vision the work of the master is revealed in all its perfection of form and color, while for the uneducated eye there is no beauty in the scarred and dingy canvas.

The focal range of the high-power objectives used in photographing bacterial organisms is so short that all of the objects in the field of view can not be brought into proper focus at the same time, even when these are attached to the thin glass covers, as is customary; for all are not in exactly the same plane, and there is a certain variation in the diameter of these minute organisms which causes the best focal adjustment for one, to be not the best for another. The aim of the operator is, therefore, to secure the most satisfactory general results; and the expert in looking at the picture will fix his attention upon the objects which are well defined, recognizing the fact that some are a little out of focus and, therefore, more or less distorted.

In view of their difficulties, I am inclined to think that it is better to place carefully executed drawings, made by the observer, in the hands of the wood engraver, rather than photo-micrographs.

By the heliotype process the latter can be reproduced with great fidelity; but owing to the expense of this process, this mode of illustration is not available for journal articles. The main value of photo-micrographs consists in the fact that they show to an expert that the observer who thus illustrates his work has sufficient technical skill in the manipulation of high powers and in preparing, staining, and photographing the organisms which he describes, to insure his readers that they are not the victims of gross mistakes, such as have more than once passed current in medical literature as the result of a facile pen in the hands of an indifferent microscopist. Beyond this, photo-micrographs possess an especial value for the observer himself. They are his memoranda of what he has seen, and enable him to compare organisms observed at different times; to detect slight morphological differences, various modes of grouping, etc.

I report the negative result in three out of six specimens of tuberculous sputum furnished me (August 10) by Prof. Hirschfelder from patients in the City and County Hospital, San Francisco. A subsequent examination by Dr. H. and myself demonstrated the presence of Koch's

bacillus in the sputum of these patients. One of these cases has since terminated fatally, and I have in my possession a portion of the lung preserved in alcohol. The tubercular nodules in this lung contain the bacillus in abundance.

A more ready way of demonstrating the bacillus in such material than the somewhat tedious process of making sections, staining, and mounting in balsam, is to make a fresh section, pick out a tubercular nodule with a clean instrument, crush it upon a thin glass cover in a drop of distilled water, dry by gentle heat, and finally stain by Ehrlich's method.

EXPERIMENTS UPON ANIMALS.

Experiment No. 3, July 29.—The following animals were inoculated with the sputum of a tuberculous patient (diagnosis by Prof. Hirschfelder, to whom I am indebted for the material): One pup, four weeks old; one half-grown rabbit (white); two smaller rabbits (spotted); one small guinea-pig. My report of the microscopical examination of the material used in these experiments is as follows: "A few bacilli were seen by Baumgarten's method, which possibly respond to the test failure to stain by methyl violet after treatment with solution of potash—but the result is not considered satisfactory, as the bacilli referred to appear to have less color than others in the same preparation, because of their smaller diameter, rather than to be entirely without color." At the present writing, I no longer doubt the presence of Koch's bacilli in the material referred to, and am convinced that the demonstration would have been made at the time if I had been familiar with Ehrlich's method.

The pup used in this experiment presented no signs of ill-health up to the time it was killed (October 11). It had, however, a local ulcer at the point of inoculation (the side of the neck), which did not entirely heal until a short time before the animal was sacrificed. Post-mortem examination did not reveal anything abnormal in the lungs, spleen or liver. The animal was fat and no tubercles were discovered in the organs named, or the serous membranes.

The half-grown white rabbit was killed October 8. A few miliary tubercles (?) of small size were found in the lungs of this animal. These did not contain Koch's ba-

cillus. Lymphatic glands from the axilla, examined by Ehrlich's method, also gave a negative result. The animal was fat, and all the organs appeared to be normal with the exception of a number of minute tubercles scattered through the lungs as stated.

One of the small spotted rabbits was killed October 9. This animal was in good condition and had grown very much since the date of inoculation. *The lungs contained groups of tubercular nodules of considerable size, and the bacillus of Koch was found in these by the method of Ehrlich.*

The other spotted rabbit has been lost sight of, and has possibly been used in one of my septicæmia experiments.

The small guinea-pig was killed October 9. The animal had grown considerably, and was in apparent good health. There was still an open ulcer, the size of a silver five-cent piece, at the point of inoculation. The lymphatic glands in the axilla, near point of inoculation, were greatly enlarged. *The lungs, liver and spleen contained numerous tubercles, and the presence of Koch's bacillus was demonstrated in these organs and in the enlarged lymphatic glands.*

Experiment No. 4, August 12.—Inoculated the following-named animals with tuberculous sputum from Dr. Brook's case. This patient was in the last stages of consumption, and has since died. The sputum contained an abundance of Koch's bacilli. One pup, six weeks old; one large spotted rabbit; one small spotted rabbit; one large male guinea-pig.

The small rabbit died at the end of three days. The lungs, liver, spleen, kidneys and brain were normal in appearance, and the remarks was made at the time that the animal probably died from some cause independent of the injection. Its colon was in a congested condition. No bacilli were found in the lymphatic glands from the vicinity of point of inoculation.

The guinea-pig died August 24. There was a considerable collection of fluid pus at the point of inoculation, which was found to contain a few of Koch's bacilli. The animal was quite fat; its liver was leather-colored and loaded with fat; the spleen was slightly enlarged and dark-colored; lungs normal. No tubercles found in any of the organs. It is the writer's opinion that the animal

died of septic poisoning (septic toxæmia due to chemical products of decomposition), resulting from the presence of the collection of putrid pus in the subcutaneous connective tissue.

The large spotted rabbit remained in good flesh, and in apparent good health up to the time it was killed, October 7. An ulcer, of small size, was discovered at the point of inoculation a few days after the operation. Pus from this ulcer examined September 14, contained Koch's bacilli. The lymphatic glands in the vicinity became enlarged, and upon making an incision into one of them (September 18) a small quantity of cheesy pus escaped. This was carefully examined for the bacillus, by Ehrlich's method, with a negative result. The absence of the bacillus was also proved by two culture-experiments, in which sterilized blood-serum was inoculated with a little of this cheesy material. No development occurred. This rabbit remained in good condition, and in apparent good health up to the time it was killed, October 7. Upon post-mortem examination a collection of cheesy pus was found at the point of inoculation, and an enlarged lymphatic gland in the vicinity contained material of the same kind. One small group of tubercles was found in the lungs. Koch's bacilli were not found in these or in the contents of the enlarged gland.

The dog was killed October 12, just two months after inoculation. It had an open ulcer at the point of inoculation for several weeks, but this had cicatrized a short time before its death. It remained active and playful, and in good flesh up to the date mentioned. Upon post-mortem examination two enlarged glands were found in the axilla, near point of inoculation, and *contained an abundance of Koch's bacilli*. The spleen contained numerous miliary tubercles, but no bacilli were found in these. The lungs were normal.

Experiment No. 5, August 14.—Inoculated two small rabbits with sputum of tuberculous, patient demonstrated, by Ehrlich's method, to contain Koch's bacilli.

One of the rabbits was injected with normal saliva (my own) October 3, and died of septicæmia on the sixth. Its lungs contained numerous groups of tubercles, but repeated examination has failed to demonstrate the presence of the bacilli in these.

The other rabbit was killed September 25. The lungs

were found to contain *a few tubercles in which Koch's bacilli were found*. Other organs normal, with exception of two cysts in the liver containing the ova of a parasite (species?) very often found in this situation in the rabbit.

Two culture tubes containing gelatinized blood-serum, sterilized by Koch's method, were inoculated with tubercular material from the lungs of the rabbit last mentioned. These were placed in the culture oven at 100° Fah. No development occurred in one of these tubes, but in the other microscopical examination made at the end of twenty days showed that an abundant development of Koch's bacilli had taken place. As pointed out by Koch, this development takes place *in situ*, the bacilli not penetrating the gelatinized blood-serum, and not extending materially upon the surface. I have several other cultures started, and in each case with the same result, so far as the naked-eye appearance is concerned. The blood-serum remains transparent and free from other micro-organisms; the bits of tubercular material remain upon its surface; and the only change apparent is a slight lateral extension (?) and increased opacity, or, rather, a faint brownish color in place of the pearly white lustre of the original material.

Experiment No. 6, August 24.—Inoculated a small rabbit with pus from large guinea-pig (subject of experiment No. 4). This pus, which came from an abscess at point of inoculation, was found by Ehrlich's method to contain Koch's bacilli. The rabbit remained in apparent good health, and in good condition up to October 11, at which date it was killed. A single transparent nodule, the size of a pin's head, was found upon the surface of one lung. This examined at once by Ehrlich's method, was found to contain giant cells and the bacillus of Koch. The bacillus was also found in a collection of cheesy pus at the site of inoculation and in an enlarged lymphatic gland from the vicinity (axilla). This enlarged gland contained numerous white nodules, which contained giant cells and the bacilli in question.

The writer proposes to leave those who have followed him thus far to judge for themselves as to the value of the experimental evidence above recorded. Having undertaken to repeat the experiments of Koch, he does not wish to be hampered by any premature expression of opinion, as the most important portion of the experimental

inquiry remains to be made, viz: the cultivation of the bacillus through successive generations (a fortnight is required for a single culture); inoculation experiments with pure cultures; and, side by side with these, inoculation experiments with material from various sources which is free from the bacillus.

But our promises are made as to the completion of this undertaking which involves a considerable expenditure of time, and a certain amount of money—items which are of some consequence when they are drawn from the resources of a single individual. Fortunately, Koch has had a liberal government at his back and his experiments may be counted by hundreds, where those of his humble followers can not be by scores. Still the observations and experiments recorded in these papers have been no inconsiderable tax upon the writer's time during the past four or five months; and, as one engaged in interrogating nature by the experimental method, has always a sufficient number of problems before him in which he can take the more agreeable *role* of pioneer, he feels scarcely equal at present to the labor involved in following to the end the path which has been trodden by this indefatigable explorer. Nor are my facilities for doing this work such as I would wish. A culture chamber kept in operation, night and day for many months, by means of an *alcohol lamp* (no gas at military posts), is not only expensive but difficult to regulate. Rabbits and guinea-pigs are not always to be had in the San Francisco markets, and the price demanded for them indicates that they are offered for sale as pets rather than for the table, or for scientific purposes.

Perhaps, then, some one more fortunately situated will take up this matter where I leave it for the present. Or, if we wait a little, it may be that some one of the many well-known experimentalists in Europe, under government auspices, will undertake to repeat Koch's experiments, and we will then have the confirmation, as we have had the exploratory investigation, without putting our hands in our pockets; and, as heretofore, will have the calm satisfaction of knowing that we receive our scientific information at second-hand.

SELECTIONS.

On the Treatment of Pneumonia.*

BY PROFESSOR DUJARDIN-BEAUMETZ,

Physician to the Hospital St. Antoine, Member of the Academy of Medicine, Paris, France.

LECTURE II.

From Boston Med. and Surg. Jour.

Gentlemen—At the close of my last lecture I had begun to speak of hydrotherapy in pneumonia.

Although the treatment of acute inflammatory disorders by cold applications and cold baths is of quite ancient date, this did not become an established practice till Brand, Liebermeister, Lebert (of Breslau), Fisser (of Bale), Vogel (of Berne), and Jurgensen (of Kiel), demonstrated that it was possible to treat pneumonia by this method, and treat it successfully. This practice is now limited to Germany and Switzerland. You are not ignorant of the long discussions which arose in our medical societies *apropos* of the application to typhoid fever of the method of Brand, and how that, after debating the subject in a manner characterized by want of agreement, and after repeated trials made in our hospitals, the method of treating, not merely typhoid fever, but febrile diseases in general, by cold baths, fell into desuetude.

Among the inconveniences which followed rigorous antipyretic methods we have to note that pneumonias, so treated, often, instead of being made to take a more favorable course, becomes rapidly mortal. You see, then, why this treatment of the disease came to be discredited. It is understood, however, that hydrotherapeutic measures are not altogether excluded; cold baths we condemn, but warm or tepid baths may render excellent service, as I shall show when I come to speak of the pneumonias of children.

In opposition to all the previously mentioned therapeutic methods—all of which act by depressing the system to the extent of lowering the pulse and the tem-

*Delivered in the Hospital St. Antoine, and translated, by permission, from advanced sheets, by E. P. Hurd, M. D., Newburyport, Mass.

perature—we prefer the tonic and supporting treatment, whose type is the alcoholic medication of pneumonia.

The celebrated English physician Todd, in introducing alcohol into the treatment of pneumonia, occasioned, it must be admitted, a veritable revolution.

This treatment at first gave startling results from the standpoint of statistics. Look at the figures given by Jaccoud, and you will see that while in the case of pneumonia treated by blood-letting we have an average mortality of twenty-seven per cent., the mortality is only about three per cent. under the supporting treatment.

With regard to these statistics, I need not repeat what I said in my last lecture in reference to the application of this numerical method to the solution of the difficult question, what remedies and what modes of treatment do the most good? To show you what a difference there is between results obtained from the same kinds of treatment, I have only to tell you that in Paris, in the first quarter of the present year, according to the very interesting reports made to the Medical Society of the Hospitals, on prevalent diseases, by our Secretary-General, Dr. Ernest Besnier, the mortality in pneumonia has been twenty-four per cent., while at the same time the greater number of our colleagues (if not all) were employing the tonic and supporting treatment. Between the figure given by Jaccoud of three per cent. and that of twenty-four per cent. the difference is great; it results simply from this fact, that the pneumonias at the beginning of this year, by reason of the climacteric conditions which have provoked them, have been of extraordinary severity.

How can we explain the favorable action of alcohol in pneumonia? This is an important question, on whose consideration I ask your permission to dwell for a few moments.

For quite a number of years I have been engaged, with some perseverance, in the study of the action of alcohol on the economy; and, although I have not yet attained a complete solution of this physiological problem, I believe, nevertheless, that we are warranted to-day in affirming that alcohol acts in three ways: as food, as medicine restraining waste, and as a tonic. Let us examine each of these properties.

Alcohol acts as food. Here is one of the points the

most disputed in the physiological action of this substance. You are well aware that there are two decisive opinions as to this action: one party maintains that the larger part of the alcohol ingested is burned in the economy; this is the opinion defended by Liebig, Bouchardat and Sandras. The other party, represented by Perrin, Lallemand and Duroy, claims, on the contrary, that alcohol undergoes no modification in our tissues.

In support of each of these opinions chemical arguments have been adduced, and physiological arguments; I have not room in this lecture on pneumonia to enumerate them in their entirety, but what I can affirm, and that because I have studied the subject under all three of its aspects, is that it is impossible to furnish a direct experimental solution of this problem.

We indeed find alcohol unchanged in the tissues and in the excretions; the analysis which we recently made in our hospital service of the viscera of a man who, after killing his two sons, committed suicide by swallowing a quart of raw brandy, revealed the presence of this brandy in notable proportions in the brain, spinal cord, kidneys, liver and lungs; but the quantity which we found, did it equal that which had been ingested? Here lies the whole question.

To-day, thanks to the experiments of my excellent *interne* in pharmacy, Jaillet, we are in position to affirm that alcohol does undergo transformation in the economy. Jaillet has, in fact, demonstrated that in presence of hæmoglobin and oxygen alcohol is transformed into aldehyde, then into acetic acid. This reaction, which takes place in the apparatus of our laboratory, ought also to take place when alcohol is introduced into the economy and passes into the blood. Alcohol is, then, a food, and we can qualify this statement by saying that it acts as food by giving force and restraining waste. In order to undergo its successive transformations in the system, alcohol takes its oxygen from the blood, and in particular from the oxy-hæmoglobin; and if the dose is too large, it stops hæmatosis and the individual dies asphyxiated. In thus withdrawing from the blood the oxygen necessary to effect its transformation into acetic acid, alcohol diminishes the combustions of the economy, and it is probably in this way that it depresses the temperature in fever patients.

In fine, alcohol acts unchanged upon the cerebro-spinal centers, and determines there phenomena of excitation and tonicity, and it is in this way that we explain its tonic and stimulant action.

From these conclusions it is easily understood how alcohol comes to be of service in the treatment of pneumonia. It supports the vital forces, braces up the tissues, and instead of augmenting the temperature, lowers it.

At the Medical Congress in Brussels, in 1875, I maintained, with Semmola, of Naples, and against Desguin and Crocq, who protested against the use of alcohol in pneumonia, that of all antipyretic remedies alcohol is assuredly the safest.

However, this question of the application of alcohol to medicine, and in particular to pneumonia, is one of the most delicate and difficult questions in therapeutics, and we are reminded that the transit from the province of experimentation to practical clinics is likely to be a violent transit. I am at one with Peter in this respect, who shows the great difference which exists between an animal whose temperature you depress experimentally by the administration of alcohol, and a pneumonic patient whose temperature you have by the same means brought back to the normal standard; you obtain results in the one case by attempting to poison, in the other by attempting to cure.

Experimentation with animals, in fact, takes note only of the toxic effects of the substance which it investigates; very rarely the experimentalist is in position to observe therapeutical effects. It is experimental toxicology, and not experimental therapeutics. To conclude *from* what takes place in animals poisoned by alcohol *to* what takes place in a fever patient who has been treated by medicinal doses of alcohol would be to commit a serious mistake. To decide this question, then, we must refer ourselves to the clinic, and to the observation of the sick; we shall then see that in certain determined conditions, which I shall set forth when I shall give you the indications and contra-indications of the treatment of pneumonia, alcohol gives excellent results.

Has this alcoholic medication any inconveniences? Yes, and certain English physicians, and in particular Drysdale and Kerr, have been the first to point them out. The administration of alcohol to your fever patients

may give them the taste for ardent spirits, and females, especially, have been known to become tipplers after recovery from a pneumonia that was freely treated with spirituous liquors.

You know, gentlemen, the vehemence of the contest which is carried on in England against the abuse of ardent spirits. The temperance societies, with a zeal that merits every encouragement, persist in opposing the ever-increasing progress of intemperance. You comprehend, then, that the partisans of the temperance leagues stand dismayed before such results. But cases where the use of alcohol in medicine has led to chronic alcoholism and all its evils are exceptional. A much more grave inconvenience, in my opinion, attends the usage of alcohols in large doses. I allude to the disturbances which these liquors may occasion in the digestive tube, especially when they are of bad quality. I shall return to this point in my next lecture.

By the side of the noted methods of treatment whose history I have just traced, we must place expectancy; that is to say, the doctrine that it is well to leave pneumonia to work out its own evolution, without directing against it any active treatment.

I showed you, in my first lecture, that one of the first results of statistics in the study of the treatment of pneumonia, has been the startling discovery that pure expectancy gave more advantageous results than the employment of energetic medications; and Skoda, Dietl, in Germany; Magnus Huss, in Norway; Bennett, in England, and Laboulbene, in France, have produced numerous statistics demonstrative of this fact.

But since the introduction of the medication by alcohol, expectancy pure has lost many of its partisans, and we shall see as we continue this course, that if expectancy is the logical consequence of the cyclical march of pneumonia, it can not be raised to the dignity of a therapeutic method; for according to the circumstances, and according to the complications, the duty of the physician is to render assistance.

Permit me to finish this lecture in enumerating, by the side of the great methods of treatment which I have been considering, the divers medications which have also been recommended. Strohl, of Germany, has vaunted sugar of lead, and Leudet claims good results from the

same remedy; Greenway, in England, strongly advises phenic acid; James, the salicylic acid; Salvator Avigo, small doses of calomel; while Patton is certain that no medicament will ever give as good results as the salts of ammonia, and especially carbonate of ammonia; he claims ninety-four recoveries out of ninety-six patients. In fine, aconite and ergot of rye have their champions.

There are certain extraordinary medications to which I will just allude: the treatment of pneumonia by inhalations of chloroform, as recommended by Baumgartner and others; the administration of cantharides to pneumonic patients (Mendini); the aspiration of blood from the inflamed lung by means of a Dieulafoy aspirator.

I have now brought before your notice the greater part of the remedial means proposed against pneumonia; in a word, I have made you acquainted with the weapons which you are to use, but *how* are you going to use them? This is what I propose to tell you in my next lecture, in which I shall speak of the indications and contra-indications of the treatment of pneumonia.

A Difficult Obstetric Case.

READ before the Grant County (Ind.) Medical Society, by S. C. Weddington, M. D.

On the night of January 1, 1882, I was called to the assistance of Dr. H. D. Reasmer, of New Cumberland, Ind., in a difficult obstetric case, arriving a little after midnight. The lady, Mrs. R., is a middle-aged multipara—has some five or six children. She is rather large, well formed, healthy, and has heretofore had easy labors. I was informed by Dr. Reasmer that he had come to the case about eleven o'clock A. M., on that day, and that on his arrival he found a face, or rather a brow, presentation; the forehead towards the right acetabulum; the chin towards the left sacro-iliac symphysis, and entirely above the superior strait. Also, there was prolapsus of the cord, which was pulsating very feebly and soon ceased; also, one hand was beside, or in advance of, the face; the os uteri was dilated; the liquor amnii had escaped some time before his arrival; and the uterus had contracted firmly around the body of the child, the contractions being then strong.

The doctor made an effort to rectify the position of the head, but the contractions were so strong he could not. He then introduced his hand to effect podalic version, but the contractions cramped his hand. He succeeded in bringing down one foot, but could not reach the other; and the child was clasped so strongly by the uterus that he could not succeed in turning it. He then introduced the forceps, but could not get them to hold firmly enough to deliver; they would slip off.

He then asked for assistance. On examination I found the situation and conditions just as described by Dr. R., except that the child had then been dead several hours, and the uterus was probably more firmly contracted. I first made an effort to turn, but the uterus was so firmly contracted around the body of the child that I could not possibly reach the lower extremities (what some have called hour-glass contraction).

There was much anterior obliquity of the uterus, and the forehead of the child seemed to rest on the pubic bone. I introduced one blade of the forceps and tried to press it off, but I could not perceive that it moved. I then introduced the other blade and made traction in the direction of the axis of the superior strait, making strong compression, as the child could not then be injured, and I soon found that the head was moving slowly. As soon as it began to move, the pains which had been frequent, sharp, cutting, but not effective, became strongly expulsive. We handled the forceps by turns, changing frequently; and by using all the force we could apply to the forceps, only while the contractions were strong, and using pressure above the pubes and over the fundus of the uterus a part of the time, we made slow but steady progress, completing the delivery at three o'clock A. M. After the face had reached the perineum, the forceps slipped off once. The head receded a little and did not advance at all until they were again applied. I think there was no time, during the progress of the case, before the head had passed the inferior strait, when the unaided powers of nature could have completed the labor. Without aid the patient must have perished; and I think it was certainly good policy to give aid before her strength was exhausted.

Dr. Reasmer's forceps and mine are both of the same pattern, being what are called Brickell's, a modification

of Hodge's forceps. We found, on comparing them, a little difference in the points of the blades, mine being more curved inwardly at the points than his; rendering his, perhaps, a little more easily introduced and a little less liable to hurt the child than mine, but not so well calculated to hold in a case requiring much force in traction. Applying the forceps so high made it necessary to make traction backwards and downwards, which he did, by using both leverage and traction, with one hand at the extremities of the handles and the other at the pivot. I thought of Tarnier's forceps, but could not see how they could have been better than those we had, unless the traction rods could have passed through the sacrum. Short forceps, or very slender ones, of course, would have been of no use in the case. The question of craniotomy was raised, but from the height and position of the head and the difficulty of reaching a suture, or of penetrating the os frontis, we thought it best to rely on the forceps.

The child was large, well developed, and seemed to have been healthy until the occurrence of labor. We remained some four or five hours after delivery. There was no untoward symptom. The lady seemed to be doing well, and said she felt nearly as well as after an ordinary labor. She made a good recovery.

[Several criticisms upon the management of this case suggest themselves.

A brow and hand presentation, unarrested, is not a case for forceps.

The use of the forceps blade, as described, between the brow and the pelvic brim, if actually accomplished, was a dangerous procedure.

The relaxing effect of chloroform would have been of great service in facilitating version or the operation of converting into vertex or face presentation.

Perforation and the use of the cephalotribe, would seem to have been the proper method of delivery after the death of the foetus.]—*American Med. Digest.*

Static Electricity as a Therapeutic Agent.

At a recent meeting of the New York Academy of Medicine (*Bost. Med. and Surg. Jour.*), Dr. J. Knight

read a paper on this subject. The author stated that he had had a personal experience with static electricity, of fifty years. He related a case of wrist-drop which he had cured in two weeks by its application from the shoulder to the phalanges. Very frequently, on account of unfavorable atmospheric conditions, he has been compelled to resort to dynamic electricity as a substitute. But he has now obtained an instrument (Holt's induction machine) by which static electricity can be generated in any quantity at almost any season of the year. Static electricity differs in its effects from dynamic, and is more widely applicable as a therapeutic agent. It is not only an excitant but a sedative as well, while dynamic electricity acts merely as an excitant. He believes that static electricity co-operates with vitality, and this is always to be regarded as the central idea in connection with electricity. In the second place, it has great reactive power. This is so intense that the nervous system will respond to electricity when all other stimulants have failed to excite it. It is likewise an alterant, changing the action of an organ by improving its general tone, and it promotes nutrition. As a general rule, it is better to have the current feeble rather than strong, and it is advisable to repeat it at frequent intervals, applying it at each sitting for a considerable time continuously. Golding Bird stated in 1846 that static electricity ought not to be used in confirmed organic trouble, as in such cases it was likely to bring on fatal apoplexy. Dr. Knight does not hesitate to use it in such cases in his own practice, but he believes that venesection, in addition, is essential, to avoid the dangers referred to. He has found it especially useful in various forms of paralysis of the hand and fore-arm, and in not a single case of this kind has it failed to afford relief. In rheumatic paralysis or wasting of muscles he found it very useful, and in only two out of ten such cases has it failed in his hands. He places the patient on an insulated stool and applies the electricity from the upper cervical vertebræ to the extremities, drawing it off by means of metallic points. In conclusion, he gives a warning as to the abuse of the agent, and says that he has seen patients who have been irrecoverably injured by this as well as by dynamic electricity. If a tendency to apoplexy is noticed during its employment, hydragogue cathartics will generally suffice to re-

move it; but, as already mentioned, it will be necessary in some cases to resort to venesection. Dr. Dana had obtained excellent results in two cases of constipation, where galvanism and other agents had failed. Dr. William Morton is of the opinion that the electricity should be used in large quantity, and should be applied, as far as possible, directly to the spot affected, as he does not believe it to have any general effect upon the system at large. He considers it to be almost a specific in hysteria. Many cases of spinal anæmia, with emotional disturbances, hemi-anæsthesia, and other similar manifestations, will yield beautifully to free applications of static electricity to the spine. Dr. Rockwell considers static electricity very valuable, but does not believe it to possess more merit than some of the other forms. In a number of instances he has noticed that after a time the improvement which had at first taken place under the use of various forms of electricity ceased, and in these cases the static form can be resorted to with very good results.

Treatment of Typhoid Fever by Antiseptics, Especially Carbolic and Salicylic Acids.

A COMMUNICATION of M. Vulpian to the academy upon the treatment of typhoid fever by salicylic acid is of the most interesting character. It is an accepted belief that typhoid fever is an infectious disease, like others, with a parasite in the blood which all efforts to overcome have heretofore been vain.

The treatment by quinine, formerly highly recommended by Bean, is now almost forgotten. Sulphate of quinine is, however, one of the most powerful antiseptics. Attention was again called to this fact last year by M. Hallopeau. The phenic acid treatment has awakened an enthusiasm which to our mind seems excessive. Indeed, in a recent discussion before the *Société Médicale des Hôpitaux*, we observed that now those who had most eagerly accepted the medication by carbolic acid had abandoned it on account of the dangers it involved. On this account M. Siredey, for example, announced that he no longer gave phenic injections except to modify the fetidity of the stools, and immediately after, having given a carbolic acid injection, he gave a large injection of

water to cause its evacuation before its absorption. Carbolic acid intoxication is a dangerous phenomenon, and it has always been a matter of astonishment to surgeons to see physicians prescribing internally carbolic acid with an amazing liberality, while they, always on the lookout for absorption by the skin or by the surface of wounds, are constantly busy with the inconveniences of this precious antiseptic.

I may add as a corollary that a number of times I have observed in patients treated medically with these poisons that it has been easy for me to recognize the symptoms at the outset, so familiar have I become by long experience with the action of phenic acid.

All are agreed, however, whether it is true that the acid lowers the temperature or not, that it modifies in no particular the progress of the disease.

M. Vulpian has experimented with other antiseptics, and has employed iodoform, salicylate of bismuth, boric acid and salicylic acid.

Iodoform, boric acid, as much as twelve grammes a day; phenate of soda, as much per diem as nine grammes, were given without result.

Salicylate of bismuth, twelve grammes a day, lowered the temperature, disinfected the stools, and brought about general improvement; but caused dyspnœa, nasal and intestinal hemorrhages.

M. Vulpian then gave salicylic acid in powder, adopting a very simple form of administration, twenty-five to thirty centigrammes in wafers every two hours up to six or seven grammes in the twenty-four hours; each dose should be followed by the ingestion of a liquid, either water or wine. In general, the medicine was well borne.

The only accident which seemed to him attributable to the salicylic acid was a little delirium. He met with neither dyspnœa nor hemorrhage. The result was a lowering of temperature as with phenic acid, but more persistent. The general condition was very favorably modified, but the duration of the sickness did not seem to have been materially influenced. M. Vulpian concludes then, that, without constituting a curative agent of typhoid fever, salicylic acid exercises upon the disease a moderating action of sufficient power to merit a place among the best modes of treatment. He asks the question whether this substance might not be employed as a prophylactic,

and whether this substance, incapable of neutralizing the poison when once the system is invaded, will not act to ward it off. It is well known that a healthy man has very well borne two grammes of salicylic acid a day.

In the course of the discussion, M. Bordeaudat appropriately called attention to turpentine, a very powerful antiseptic agent, very diffusible and unfortunately neglected in the midst of all these researches.

In conclusion, it is a question which remains to be studied. It is impossible to deny that antiseptics have accomplished something, and agreement upon this conclusion will certainly be reached, if it is not forgotten, that antiseptics have very different elective actions and act very differently upon the different micro-organisms. But, at any rate, the reader will be struck by this proposition of salicylic acid administered daily as a prophylactic, when it is taken into consideration that it has only been a short time since the employment of this salt was condemned in unmeasured terms. Salicylic acid attacked us on every side, it was said; it is a most dangerous poison, and it endangered even when administered in the most insignificant doses. The wisest have always thought that there was a singular exaggeration upon this point, and that it was best to limit the employment of an article little enough objectionable, provided it was not ignorantly abused.—*Journal de Médecine et de Chirurgie Pratique.*

Anesthesia in Labor.

DR. W. H. MAYS, of San Francisco, writes as follows in the *Western Lancet*:

1. Anesthesia is as necessary in childbirth as in surgical operations.

Pain is, even when viewed scientifically, only a potent evil. Pain is a disease itself, lighting up in the economy its own set of consequences. Unchecked, it goads the nervous system to madness; and pyrexia ensues, with functional and organic disturbances. The whole duty of medicine may be summed up in two requirements: first, to remove pain; second, to prevent it. Opium, which deadens pain, is the most valuable of all drugs; rather than lose it, we could afford to part with all the rest of materia medica besides. Chloroform, which also produces

insensibility to pain, initiated in its discovery a new era in surgery. Yet there are physicians who, while they never hesitate to prescribe an opiate in cases of severe suffering, who never perform an operation without first anesthetizing the patient, yet will stolidly watch, hour after hour, the agonized throes of a woman, and stretch forth no hand for her relief. The tortures that women often endure in the process of parturition are often beyond conception—at least beyond *our* conception. Take the case of a newly-married girl, gentle, tenderly reared, and fragile as any flower. Of suffering, of endurance, she knows next to nothing; her life has always been shielded by loving care, her wishes gratified, her whims indulged. As is the case with so many American girls, her nervous organization is highly developed, her sympathetic system hypertrophied. She finds herself confronted with childbirth. At the first onset of pain, the little barrier of fortitude she has built up for the occasion is swept away and she is taken possession of by a terror that her panic-stricken brain fails utterly to control. There is no escape! While one pain is holding her in its terrible grip, she knows the next will be yet worse, and the interval is spent in frenzied anticipation of still greater sufferings to come. With nerves strung to a fearful pitch of tension, and reason dethroned by fright, the poor sufferer writhes this way and that, and shrieks in wild despair: "O let me die! I would rather die than endure this."

Throughout this scene the old-fashioned physician preserves an unruffled demeanor, and tries to comfort the wretched sufferer with stereotyped phrases; tells her in pitiful mockery, to "try to rest between the pains;" reminds her, with specious reasoning, that "all women have to go through the same," etc., and withholds in the very acme of physical suffering the blessed unconsciousness that he willingly supplies for the mere drawing of a tooth or lancing of an abscess.

2. Anesthesia, properly used, does not diminish⁴ the force of uterine contraction, but rather promotes labor by lessening the resistance of the parturient canal.

It has been urged against the employment of anesthetics, that it has a tendency to retard labor by diminishing the energy of the uterine and abdominal contraction. I admit the force of this objection when chloroform has been wrongly administered—that is to say, when it has

been pushed to profound anesthesia. But chloroform should not be so used except in extreme cases. It is only the slight, first stage that is required. If pushed to the third stage, that of complete narcosis, chloroform is abused. It is wonderful how prompt is the calming effect of a little chloroform on a handkerchief. After a few eager whiffs the excitement subsides as if by magic, the shrieks and frantic tossings stop almost instantly, and dreamful ease takes the place of tumultuous misery. The chloroform has not been pushed far enough to stupefy the patient, the contractile efforts return as before, she feels their onset and responds by bearing down, yet goes through it all in half-conscious drowsiness. The cruel, tearing pain is vanished, the rebellious muscles yield, the parts distend, and labor is soon a tale that is told. She wakes, if it can be called waking, from what was not sleep but tranquil forgetfulness, to find her trouble over and to rejoice at the cry of her babe. Slight intermittent anesthesia is sufficient to produce all these happy consequences. Never should snoring be produced. It is not insensibility that is to be aimed at, but only a diminution of pain. Administer about a drachm on a folded handkerchief at each pain, suspending it as soon as the pain has passed away. It is a good plan to let the patient hold it herself, as thus deep anesthesia is prevented.

3. Anesthesia, properly used, lessens the danger of rupture of the perineum.

This follows as a corollary to the preceding. . . . On this point Fordyce Barker says: "The perineum relaxes and dilates with remarkable rapidity after inhalations of chloroform. Where danger arises from violent uterine contraction, anesthesia will save the perineum."

4. Anesthesia, properly used, has no injurious effect upon the child.

Those who have raised the question of the transmission of narcotic influences to the foetus in utero as a reason for discountenancing the use of chloroform in labor, have failed signally in making out a case. Dr. Paul Munde says: "Probably none of us who have frequently administered chloroform in obstetric cases can remember a case where the foetus was the worse for chloroform." Dr. Fordyce Barker says: "We know that thousands of women have been kept under anesthetics for hours during labor, and the infant when born has been as active and lively

as if no such agent had been used. For more than twenty-five years I have given chloroform to every woman whom I have attended in labor who had sufficient pain to require such relief, and I have never had the slightest reason to suspect that the child was in any way affected by the use of the agent." He goes on to mention one case which he kept profoundly under chloroform for twenty-six hours—a woman who had convulsions, and the child when born was perfectly well. Dr. Lusk, of New York, in a list of reasons for caution in the use of chloroform during labor (he does not oppose its use), does not even mention the contingency of danger accruing to the child.

As far as my own experience goes, I never employed anesthesia in labor without profound satisfaction, nor did I ever find it fail to relieve pain and the dread of pain, or to exert a tranquilizing and economizing effect upon the mother. I have had occasion to use it in about one-third of my confinements.

I urge, therefore, in conclusion, that there is nothing to forbid, and everything to commend a more frequent resort to chloroform in child-birth, as much for its moral as for its physical effect. Used with a proper caution, it is by far the most valuable of our aids in the management of labor.

Two Cases of Nasal Alimentation.

BY D. N. RANKIN, A. M., M. D.,
Of Alleghany City, Pa.

CASE 1.—John McC., æt. twenty-eight years, of an anæmic appearance, had, on Friday, September 19, 1879, a molar tooth of lower jaw extracted by a dentist; bleeding from the socket continued through Friday night, and all day Saturday. On Saturday evening I was sent for to stop it. Upon examination I found the blood oozing quite copiously from numerous points. I learned from some of his friends that the man was of a hemorrhage diathesis; they informed me that he had almost bled to death under similar circumstances, on two previous occasions. I applied the usual styptics, with no benefit whatever; then the actual cautery was applied, with no better result. I then concluded to pack the cavity with lint, saturated

with sol. persulphate of iron (Monsel's), with beeswax over it, and a cork compress over all; the lower jaw was firmly bound to the upper one by a bandage over the top of the head and under the chin. This plan succeeded in checking the hemorrhage, but to make it successful the appliance was retained several days. Now came the most trying part of the treatment: how was this man to be nourished? The idea at once presented itself to my mind to introduce nutritious fluids through the nares. I secured a sol. citrate of magnesia bottle, had the bottom filed off, put a small glass tube through the cork (which had previously been placed in the mouth of the bottle); to this a sufficiently small-sized gum tube, to pass through the nares easily, was attached; after oiling the tube I introduced it into one of the nares, past the pharynx, into the œsophagus; it worked admirably. At the first operation, one-half pint of milk and one-half pint of beef tea were introduced; this procedure was continued three times a day, for four days, until Wednesday, September 24, when the cork and wax were removed, and no further hemorrhage occurred.

CASE 2.—Tillie R., æt. twenty-four years, was admitted into the Western Penitentiary of Pennsylvania, in June, 1873, for a term of three years. At the time of her admission, she was six months advanced in pregnancy. At her expected time she was delivered of a son; everything progressed favorably; for eighteen months she was fed on the best food the prison could afford, in order that she might supply nourishment of good quality and sufficient quantity for the child. When the babe was eighteen months old, I deemed it proper to wean it, and from this time she was ordered to eat the regular prison food. From that day the interesting part of this case commenced; she positively declared that unless she was supplied with the same kind of food she had been having since her child was born, she would take none, and said she would starve herself to death. This, I told her, she could not do; she defied me; a quart of beef tea was soon in readiness, and with the aid of four stout men, and with considerable difficulty, the quart of beef tea was introduced into her stomach by means of a stomach-pump. Her persistency in still trying to starve herself was so great that I concluded to try some more easy, at the same time equally efficacious, means of introducing nutritious fluids into her

stomach; a gum tube, two and a half feet long and one-fourth of an inch in diameter, was secured, and a small tin funnel fitted to the one end of the tube. Everything being in readiness, she was again held by four men; this time she anticipated the procedure by holding her lips and teeth firmly, expecting that I was going to introduce the tube of the stomach-pump, as had been done previously. But before she was aware of it, the soft gum tube, well oiled, was passed through one of the nostrils, and the greater part of a pint of milk was introduced through it into the stomach. It was only then that she found all her efforts at keeping her lips and teeth so firmly closed did not baffle me in the effort I had undertaken. The same procedure was gone through with three times a day for three days. On the fourth day she concluded, as she remarked, to take her meals in the regular way.—*College and Clinical Record.*

MICROSCOPY.

Beck's Objectives.

We notice these objectives for the reason that we believe we will really be doing our readers a favor by drawing their attention to them. The manufacturers make three varieties. The first are high priced, and are the product of the highest skill of the art of the optician. They do not exhibit great angles of aperture, so as to display the wonders of resolving power to be thus gained—making the capacity of a low-power glass equal to that of a higher one, in bringing into view fine markings by magnifying by means of the eye-piece instead of by the objective. The various powers are each of such angular aperture as experience has proven to be the best for a working lens—the proper relation between all the qualities being maintained. We know of no series of microscopic objectives that better represent in all the combinations of their qualities—the finest and most delicate workmanship, angle of aperture, resolving power, penetration, focal length, etc.—the most consummate skill of the artist. The tenth of this series, made immersion, of 160° angle, which sells at the low price of \$50, combines excel-

lencies which are seldom surpassed by objectives of the same power of other makers. The one-fifth, dry, of 100° angle has no superior as a working glass. Although the price is \$52 50, no one, after having made use of it sufficiently long to become acquainted with its merits, would consider it exorbitant. The high priced objectives of the Beck differ from those of other makers in that they are made to work with, and are not mere optical curiosities. The labor expended upon them, which renders them necessarily high priced, has been for the purpose of developing the highest quality and imparting the greatest capacity possible with a proper relationship existing in all of its characteristics. The expensive series of nearly all other makers are made so in developing excessive angle of aperture, so as to give to a low power resolving properties that belong properly to a much higher power of medium angle. While such glasses are curiosities, and exhibit progress in practical optics, they are not suited to the purpose of the worker. He wishes, of course, resolving power, but it must be consistent with other qualities. The highest is not needed in a low or medium magnifying power objective. That which can only be had by great aperture should be relegated to the high powers, which should be employed when it is desired to study markings only. The one-eighth of this series of the Messrs. Beck is of 120° aperture, the one-twentieth is of 170° .

The second series of the Beck object-glasses is termed the "Ideal," after the name of one of their stands. These lenses have been carefully formulated to meet the wants of *working* microscopists, who, as it is stated, "whilst requiring most exactly the very highest performance in a lens, as to flatness of field, freedom from color, penetration, and perfect definition and resolution, do not care to pay the prices necessarily charged for *fancy lenses*, made regardless of cost." The quarter inch of this series has an angle of 75° , and sells for \$20. The one-eighth has an angle of 85° , and sells for \$40. We have carefully examined the various objectives composing the series (or rather the portion of it ranging from the one inch to the one-eighth inclusive, numbering the five powers, 1 in., $\frac{1}{2}$ in., $\frac{1}{4}$ in., $\frac{1}{8}$ in., $\frac{1}{16}$ in.) and can assert that they are capable of satisfactorily performing all the work the most exact scientific worker will have occasion to do. A few years ago, unless a microscopic investigator was in pretty good cir-

cumstances, he was compelled to put up with very inferior glasses, such as the common French commercial trip-lets, whose main quality was enlarging imperfectly—some parts of the field being very dim and none very clear. But it is no longer the case now; for a glance over the prices of the "Ideal" series will show that not merely good glasses, but really superior ones, can be had at a very moderate price. Of this series all the powers from the quarter up, have cover correction.

The third series is termed the "New National Series Objectives." The lenses of this series are still lower priced than those of the preceding, but it would require an expert with a test object to detect the difference in the quality. They are named after one of the Beck stands, and are supplied not only with that stand when it is purchased and the "Economic" stand, but also with the "Ideal," unless otherwise ordered. These glasses meet the demand for good and well corrected objectives. They are fully capable of performing in the most satisfactory manner all the work of the physician, botanist, entomologist, geologist, etc. It will be seldom that a scientific worker will need any better lenses. The quarter inch resolves the *P. angulatum* easily. The price of this power is only \$12, that of the eighth, \$20.

The Origin of Life.

Dr. J. P. Whitney, San Francisco Microscopical Society, read a long and abstruse paper on the above subject, of which it is possible to report here only the salient points. Starting with the diffused cosmic vapor, he showed how, by its condensation, suns and planets were formed, and how the planets gradually reach the condition which then makes life possible. The question then is, whence comes this life? The simplest form of life we know is the structureless moner, composed of protoplasm. Dr. Whitney's thesis is that, as all the constituents of protoplasm, hydrogen, oxygen, nitrogen and carbon, exist both in the air and in the sea-water, they are there combined by the action of sunlight, forming in the air those innumerable germs which Tyndall has shown to there exist, and in sea-water, the *Bathybius*—the true *Bathybius*, for whose non-existence there is only negative evidence. The difference be-

tween Dr. Whitney's views and those held by most evolutionists, Spencer, for instance, seems to be that instead of regarding the extremely complex compound, protoplasm, as the result of a series, long in number and time, of organic compounds combining and recombining, he asserts its immediate, or nearly immediate, formation from its elements in the air and sea-water. Still further, he considers the protoplasmic life thus originated to be the germs that on development are the lowest forms of life we know, whereas, Spencer, for instance, says: "I conceive that the moulding of such organic matter into the simplest types, must have commenced with portions of protoplasm more minute, more indefinite, and more inconstant in their characters than the lowest Rhizopods, less distinguishable from a mere fragment of albumen than even the *Protogenes* of Prof. Haeckel".

It must have been a long time in this gradual progress of life before there were reached organisms of such complexity as is implied by origin and development from a germ. Dr. Whitney devoted his paper to the stating, rather than the substantiating, of his thesis.

Proceedings of the American Society of Microscopists, Held at Elmira, N. Y .

Our hearty thanks are due to Geo. E. Fell, M. D., of Buffalo, N. Y., for a copy of this very interesting volume. It contains the proceedings of the fifth annual meeting, together with the papers read.

The volume has been received too late to give it as extended a notice at this time as it deserves. We will, however, refer to it in the future. Among the valuable papers we notice in it is a very interesting memoir of the late Charles A. Spencer, the father of American Microscopy, by Prof. Hamilton L. Smith. This memoir is worthy of publication by itself, for every one at all interested in microscopy would undoubtedly desire to have it. We are told in it how an American "backwoodsman," who never had any instructor in the science of optics or in making optical instruments, entirely self-taught, made a lens with tools of his own devising, that was the wonder of the scientific world—that brought before the vision what no lens made by the most skillful European makers had

ever exhibited. Of course, the feat this glass then accomplished is easily done now, but the untutored American backwoodsman, Charles A. Spencer, paved the way for the progress that now makes it easy.

Another very brief memoir is that of Mr. Ernst Gundlach, who came from Germany to this country in 1873. Before coming here he had a European reputation as a maker of microscopic lenses. We notice that the fact is mentioned that the first work he did on reaching this country and commencing work at Hackensack, N. J., was the construction of two immersion objectives for the editor of this journal (a one-sixth and a one-tenth) which won the admiration of many distinguished microscopists, including Dr. J. J. Woodward, of the U. S. A. Medical Museum, Washington, D. C. We had the lenses with us in Washington for a number of days, and afforded a number of eminent microscopists, besides Dr. Woodward, from New York and other cities, the opportunity of examining them. Since then Mr. Gundlach has done much fine microscopical work, and no maker of lenses in the world holds a higher position. In 1880 he produced a series of homogeneous immersion objectives, having apertures of 136° in balsam, and combining remarkable working distance with most excellent corrections and performance. He has also contributed no little to the literature of microscopical optics. Several years ago he contributed a number of articles to the pages of the *Medical News* that exhibited research and learning.

But our readers must not suppose the volume of proceedings is made up merely of memoirs of distinguished opticians. There are many scientific papers of a most interesting character. We notice papers by Prof. H. L. Smith, of Geneva, N. Y., Henry Mills, of Buffalo, Lester Curtis, M. D., of Chicago, Thomas Taylor, of Washington, E. H. Griffith, Fairport, N. Y., F. M. Hamlin, of Auburn, N. Y., M. L. Holbrook, M. D., New York City, Simon H. Gage, Ithica, Ephraim Cutler, M. D., Ernst Gundlach, Rochester, Prof. Wm. A. Rogers, Cambridge, Mass., and a number of other gentlemen.

A CALIFORNIA physician has discovered a parasite producing the disease called love madness. He has isolated the germ and inoculated several persons. In every case the characteristic phenomena of the disease were speedily manifested. So says the New Orleans *Medical Journal*.

GLEANINGS.

A RARE SURGICAL OPERATION.—An unusual and interesting operation was recently performed in the public eye clinic in the amphitheater of Jefferson College Hospital. The operation was performed by Dr. W. S. Little, chief of the eye clinic, and will no doubt have a successful result. It consisted in transplanting the conjunctiva of a rabbit into the eye of a man who was brought into the hospital a couple of months ago, suffering from a severe burn that had entirely destroyed his sight. He is a young Irishman, named Michael McMullin, twenty-eight years old, just over from the old country a few months, a strong, well-formed, healthy fellow, but as helpless as a child, in his blindness. Shortly after coming over he secured employment in a large chemical works, and while handling strong sulphuric acid the fluid splashed up over his face, head and chest, burning him terribly and suddenly and completely blinding him. The right eye was destroyed entirely, and the left one so injured that anchyloblepharon resulted, that is, the lids grew fast to the ball, the burn having destroyed most of the conjunctiva. It was decided to resort to this rare operation, with the hope of restoring the ball and lids to their normal condition, and afterward of securing sight to the injured left eye.

Dr. Little, after some trouble, succeeded in getting a healthy buck rabbit, a large, fine fellow, of the lop ear variety. He was fastened firmly to an apparatus used in experimenting on animals, and ether being administered to the man and rabbit, both were soon under the influence of the anæsthetic. Dr. Little, assisted by Drs. H. F. Hansell, Wright and C. M. Wilson, soon had the eyelid of the man loose from its firm adhesion to the ball, and ready for the new piece of conjunctiva, which Dr. L. W. Fox, assisted by Dr. Ad. Hewson, Jr., had carefully and skillfully dissected from the left eye of the unconscious rabbit. The part, still warm and bleeding, was rapidly transferred to the under surface of the man's eyelid and neatly stitched to its place. He was then removed to the ward up-stairs, and it was hoped that in a few days the wound would be entirely healed. That much being accomplished, another different operation will be resorted to, that will most likely restore to the man the invaluable blessing of

sight. The rabbit, however, will soon have a completely closed left eye, which will not be regretted, even by the most ardent followers of Bergh, if the unfortunate patient is benefited.

THE SEQUEL OF A MEMORABLE OPERATION.—A few days since Prof. W. H. Pancoast, at a clinic in the Philadelphia Hospital, introduced a young man who was once the subject of a remarkable surgical operation, being the separation of an infant from a monstrosity, which was virtually another chaotic foetus developed from his cheek. The person referred to was G. W. Lytle, a young man of twenty-four, residing at Connellsville, Pa. His only peculiarity was a deep scar on the left cheek. Dr. Pancoast then gave the class an account of the operation, of which there had been but three performed, one each in London, Paris and Philadelphia, and which consisted in cutting apart two children who were congenitally attached. The operation was performed twenty-four years ago, by Prof. Joseph Pancoast, when the young man at the clinic was an infant of seven months. The child was born with an appendage growing from the left cheek, which was nothing else than an imperfectly developed infant, with hands, feet and trunk, but no head. The operation was performed at a clinic in Jefferson Medical College, and was witnessed by many of the prominent physicians of the city. The operation was fully described in the *Medical and Surgical Reporter*, by Dr. R. J. Dunglison. It was considered bold surgery, but Dr. Pancoast was confident of its propriety, and accordingly performed it, with what success was shown by the presence of the patient himself, nearly a quarter of a century later. An interesting feature of the operation is its having been performed with the ecraseur, then a new instrument, and the first of the kind ever used in America, and brought from Europe by the elder Pancoast. Upon dissection the monstrosity was found provided with heart and gastro-alimentary tract, as well as the organs already referred to. The case attracted considerable attention abroad, and at the request of the eminent English surgeon, Sir James Paget, a cast of the detached mass and a photograph of the child before the operation were furnished to the museum of St. Bartholomew's Hospital, London. Dr. Pancoast exhibited a copy of the daguerreotype sent to Sir James Paget, and said

he would have a photograph of the young man taken after the interval which has now elapsed, and which testifies to the wisdom and success of the operation.

ESERINE AND ATROPINE.—Recent observations in ophthalmic practice have confirmed, in a most notable and exact manner, the results of the experimental study of eserine and atropine. The antagonism of actions existing between these two agents, is one of the most striking exhibitions of this principle in the whole series of physiological antagonisms. There is a notion abroad in the medical profession, that the demonstration of an antagonism in animals, can not be applied to the same condition in man; much less, can the knowledge thus obtained be utilized in the treatment of man's diseases. Besides the large amount of experimental and clinical evidence, to which we might call the attention of our readers, there were published in the issue of the *Lancet* for Nov. 11, two cases of eye disease which perfectly illustrate the success with which the study of the physiological study of eserine and atropine has been applied to physiological problems. In the first case, the condition of the eye was that of intermittent glaucoma, with increased intra-ocular pressure; in the second there was recurrent iritis, with increased intra-ocular pressure. The myositic, eserine, a pupil contractor, relieved the former; the mydriatic, atropine, a pupil dilator, was successful in the latter. Notwithstanding the increased tension of the eyeball, in both cases, remedies acting oppositely succeeded; and not by haphazard empiricism, but by the accurate adaptation of scientific principles.—*Philadelphia Medical News*.

A PLEA IN FAVOR OF PRELIMINARY EDUCATION.—The distinguished Professor of Anatomy in the University of Pennsylvania, in his recent Introductory Address at that Institution, on the occasion of the opening of the Winter session, unintentionally paid a tribute to the necessity of a sound preliminary education, while apparently slighting it. It seems to be well established that the training which the mind undergoes during a properly digested school education, preliminary to the study of medicine, is the very best form of preparation for after professional labor. In Germany, especially, the student must be thoroughly grounded in a classical education before he

enters upon his medical studies. When, therefore, Professor Leidy stated, in the address referred to, that "literary doctors might have a knowledge of classics and dead languages, and be able to pelt opponents with Latin names, but for practical use, French and German are vastly more effective," and that "three-fourths of the scientific investigations of the world take place in France and Germany," he probably forgot, for the moment that the pre-eminence of these countries, in this respect, and particularly that of Germany, has been due to the very complete preliminary education, including a knowledge of Latin and Greek, which is considered an absolute requisite to all intending medical students. "Literary doctors," as he calls them, are themselves the results of this system, and through their valuable professional work, based on such secure foundations, the scientific investigations which the lecturer held up as an exemplar were made possible. Without such a solid preliminary classical education, much less in this direction would undoubtedly have been accomplished. Judge Biddle, who gave the opening address of the Law Course, in the afternoon of the same day at this Institution, was rather more decided in the expression of his views in favor of preliminary education, when he stated that "study is the condition of success; self-made men succeed in spite of, not in consequence of, their lack of education." —*College and Clinical Record.*

EPITHELIOMA REMOVED BY SCRAPING.—At a recent meeting of the clinical society of London (*Medical Times and Gazette*), Mr. T. Holmes related the case of a young man suffering from an ulcer of the leg, which presented all the appearances of epithelioma, both to the naked eye and under the microscope. It was very large, almost isolating the tendo-achillis, and was accompanied by swelling of the inguinal glands. Mr. Holmes considered that in former times these symptoms would have been considered sufficient to warrant amputation. In this case he removed all the epitheliomatous tissue, and then made a free application of the actual cautery. Sound cicatrization ensued, and the enlarged glands subsided entirely. Many other gentlemen related their experience in this matter, which was all corroborative of Mr. Holmes, who closed by saying, he suspected that many growths originally local, tended to become epitheliomatous and consti-

tutional in type. His case certainly corresponded to the ordinary descriptions of epithelioma, and he would urge that such cases, if early treated, might result in the extirpation of a disease rapidly becoming malignant.—*Med. and Surg. Reporter*.

EMBALMING.—The principal Italian embalmers keep their special processes a secret, although the chief steps are well known. The process of embalming is stated to consist of five steps: First, cold water is injected through the whole circulatory system, until it issues quite clear; this may take as long as five hours. Alcohol is then injected for the purpose of abstracting all the water from the body; this is followed up by the injection of ether to dissolve out the fatty water; this injection is carried on for several hours—in thin subjects for two, in very fat ones for even so long as ten hours. After this a strong solution of tannin is slowly injected, and full time is allowed for its soaking into all the tissues; this takes from two to five hours. Lastly, the body is exposed for from two to five hours to a current of warm air, which is previously dried by passing it over heated chloride of calcium. The body can then be preserved for any length of time without undergoing change, and is as hard as stone.—*Lancet*, June 24, 1882.

LIGATION OF THE UMBILICAL CORD.—Professor Lusk in his new work on obstetrics, after discussing the question for and against the ligation of the umbilical cord prior to the cessation of pulsation, draws the following practical observations:

“1. The cord should not be tied until the child has breathed vigorously a few times. When there is no occasion for haste, arising out of the condition of the mother, it is safer to wait until pulsations of the cord have ceased altogether.

“2. Late ligation is not dangerous to the child. From the excess of blood contained in the fetal portion of the placenta the child receives into its system only the amount requisite to supply the needs created by the opening of the pulmonary circulation.

“3. Until further observations have been made, the practice of employing uterine expression previous to tying the cord is questionable.

“4. In children born pale and anæmic, suffering at

birth from syncope, late ligation furnishes an invaluable means of restoring the equilibrium of the fetal circulation."

In view of the present practice of immediate ligation these conclusions are pertinent.

SUBCUTANEOUS INJECTION OF APERIENTS.—The extensive use made of the Lypodermatic method of administering remedies led naturally to its application to the expulsion of substances from the alimentary canal. The result in the case of apomorphia was most satisfactory, and this agent has become the established resource in cases of poisoning demanding the expulsion of the contents of the stomach. Hiller, of Berlin (*Lancet*, Sept. 30), has experimented with aloin and substances obtained from colocynth. He found that the dose required and the time of its action were nearly the same as when given by the mouth. Colocynthin was found to act less efficiently than when injected into the bowels, the same dose causing several loose stools in four to six hours, with sharp, colicky pains, whereas, given as an enema, it acted in one half hour without pain. Hiller prefers the latter mode of administration when an energetic and quick purgative is required, as in uræmia. The officinal extract of colocynth was efficient in solution of one in thirty, injected under the skin or into the rectum. H.'s conclusions are thus decidedly unfavorable to the subcutaneous injection of aperients.

ANÆSTHETICS IN DISEASES OF THE KIDNEYS.—Dr. Laurence Turnbull (*Med. and Surg. Reporter*, Oct. 14,) dwells upon the great importance of attention to the condition of the kidneys and examination of the urine when an anæsthetic is to be administered. Many deaths unaccountable otherwise are due to this cause. In disease of the kidneys, the blood being loaded with urea, anæsthetics almost invariably produce coma and death. He enumerates a considerable number of deaths from ether and hydrobromic ether, but very few from chloroform. Norris has reported two cases of death supervening unexpectedly from sulphuric ether after operations for cataract. Both recovered consciousness, but died comatose, one in a few hours, the other after 18 days. No organic lesion was found post-mortem except Bright's disease. Cases have also been reported by Emmet, Hunt and Montgomery, verified by

post-mortem examination. The kidneys are the active agents in eliminating ether from the blood, and if they are unable to perform this office, and the skin is cold, moist and inactive, death will supervene by accumulation of mucus in the lungs, or congestion of the brain in true Bright's disease of the kidneys.

MAGGOTS IN UNUSUAL SITUATIONS.—Dr. Prince, of Jacksonville, Ill., narrates in the *Med. News*, Oct. 14th, a case of ozæna in which 65 healthy maggots had to be removed with forceps from the nares of the patient, they having resisted irrigation and other means of dislodgment. Their scavenging duties had been well performed, the discharge being freed from all mal-odor. A recent English journal also contained notice of a case in which the stools of the patient contained live maggots at the time of voiding. A lady, too, in this city, under the care of the writer, suffering from a miscarriage, showed him some blood clots, swarming with maggots, which she affirmed were present at the time of the discharge of the clots.—*Canadian Journ. Med. Sci.*, Nov.

DIARRHÆA PILLS.—Prof. Wm. Thompson, of the University of the City of New York, recommends the following as a remedy for diarrhæa:

R. Plumbi acetatis,	grs. xvi,
Pulv. camphoræ,	grs. xij.
Pulv. .opii,	grs. iij.
Bismuth Subcarb.,	grs. xij.
Ext. Gentian,	q. s.

Make into twelve pills.

Dose, one pill every hour to three hours, according to severity of disease.—*New Remedies*.

ALCOHOL IN BURNS AND SCALDS.—Saturate a soft piece of fabric with alcohol, lay it over the burn, then cover it with cotton or finely picked oakum. This is the most cleanly dressing that can be adopted. It may be thought that alcohol applied to a burn would produce more pain, but try it, and you will be agreeably surprised to observe how quickly it will allay the pain. Subsequently disturb the dressing as little as possible; wet the dressing occasionally with alcohol; and the result you will find better than any other method.—*So. Clinic*.

LEPROSY TREATED BY TINCTURE EUCALYPTUS.—Ed. Sinclair Stevenson details in the *Lancet*, July, 1882, a case of well marked leprosy occurring near Capetown, Africa. She was given chaulmoogra oil, which made her sick, and was discontinued. She was given half-ounce doses of tincture of eucalyptus in conjunction with quinine and lime-juice, and steadily improved, until in Nov., 1881, ten months later, but very slight remnants of the disease existed. The author sums up his remarks as follows:

I have no doubt to which drug I am to attribute the recovery of the patient. Quinine, lime-juice and eucalyptus were given together, but quinine was given long before any improvement began, and the lime-juice was soon left off. As to the origin of the complaint, I could not trace any taint in her immediate family, but she and her husband are cousins, and in his family the disease exists. Mr. Hutchinson in his able paper is inclined to trace the origin of leprosy to fish-eating. The inhabitants of this district do not eat fresh fish, not that they dislike the diet, but because that kind of food is scarce. On the other hand, dried and salt fish is much used, especially by the colored population; but vegetables are very scarce, some families going through the whole year without them; rice and meat, frequently salted, form the staple of their diet. The supposition that leprosy may arise from want of leguminous food, as scurvy does, may be as likely as that of the fish hypothesis.

EUCALYPTUS GLOBULUS IN GYNÆCOLOGICAL PRACTICE.—Dr. A. F. Currier, in the *Amer. Journ. Med. Sciences*, Oct., 1882, calls attention to the part which this drug plays in gynæcological therapeutics, and reports a series of cases in which marked benefit followed its local employment. The eucalyptus was distributed upon pledgets of cotton with which the vagina was lightly tamponed. The conditions calling for its use were sub-involution, prolapsus of the ovaries, malpositions of the uterus and cellulitis with which were associated much pain, tenderness and local irritation. The drug acting as an anæsthetic and antiseptic, subdued pain and gave great relief. Dr. Currier suggests that eucalyptus will also be serviceable in a different class of cases, such, for example, as wounds of the breast after removal of tumors, and other wounds treated by the open method.

SPONTANEOUS FALLING OF THE NAILS IN ATAXICS.—Petres in *le Progres Medical* records two new cases, in one of which the nails of the toes dropped off, the pains simultaneously disappeared and a new growth of nails took place. Two years after, each reappearance of the ataxic attacks was accompanied by the same phenomena about the big toes. Nothing abnormal could be detected about the new nails.

In the second case, preceding the fall of the nail there is intense pain. Since 1870 this occurs every year on the left (affected) side, but has only taken place twice on the right. In neither case was there suppuration or traumatism.

The cause is doubtless a disturbance of nutrition analogous to the other trophic disturbances such as arthropathies, spontaneous fractures, eruptions of the skin, *mal perforant*, etc.

DR. BRUNTON, of *The Practitioner*, makes a poultice thus: Have a flannel bag made; 12 by 8 inches, is convenient size. This is closed at three edges, the fourth having a flap. Four tapes are attached to the corners. Besides, a strip of flannel is prepared long enough to be wrapped once or twice around the bag. The bag and the flannel and a bowl are to be thoroughly heated. The poultice is made of crushed linseed meal, and should be of rather thin consistency. It is poured into the bag, the flap turned down and fastened and the warm flannel roller wrapped about the whole. In this way a poultice may be applied boiling hot to the skin. The heat may be retained better by applying over the whole a layer of cotton wool or oiled silk. Such a poultice will relieve where many of the common kind have failed.

FROM the daily papers we learn that another disturbance has occurred in the Michigan University. One of the students who has been a Congregational minister, claims that Dr. Frothingham, in his public lectures, went out of his way to abuse ministers and the Christian religion. The matter at last accounts was in the hands of the President of the University. The Medical Department of Michigan University is getting an unenviable notoriety lately for the bitter personal quarrels of some of its members with outsiders.

AN exchange tells the following: "A visiting committee to a hospital came to the second bed from the door of the ward. 'Well, my man, how are you getting on? Can we do anything to make you more comfortable?' The patient expressed a wish to exchange beds with the one next to the door, and on being pressed for the reason, said, 'That man is my bitterest enemy. The doctors always came in at that door, and they put the same thermometer in my mouth that has just been in that man's stern.'"

SHOULD BABIES' MILK BE BOILED?—Our brilliant contemporary, the *New York Medical Record*, noticing our recent editorial on this subject, says: "We cling to the old-fashioned view, that babies should not be milked any way, much less have their milk boiled." We trust that our readers may be able to detect the cream of this joke.—*Exchange*.

FOR the relief of winter eczema, a troublesome itching affection, Dr. Squibb's Ephemaris recommends the following. Take of tannic acid, forty grains, of glycerine and alcohol each half a fluidounce, water to make four ounces. This solution is applied to the itching surfaces by means of a small sponge or rag, morning and evening.

BOOK NOTICES.

THE DISEASES OF THE LIVER, with and without Jaundice; with the special application of Physiological Chemistry to their diagnosis and treatment. By GEORGE HARLEY, M. D., F. R. S., F. R. C. P., etc. Illustrated by colored plates and wood engravings. 8vo. Pp. 751. Philadelphia: P. Blakiston, Son, & Co. Cincinnati: R. Clarke & Co. 1883. Price, \$5 00.

This edition of Harley's "Diseases of the Liver" is published simultaneously with the London edition by special arrangement between Dr. Harley and P. Blakiston, Son, & Co. It is, therefore, the only authorized edition, and contains all the text and original illustrations.

In speaking in high terms of this work we do not do so in order to be merely complimentary to the author or publishers, or both, but because the work is of the very highest merits, having been written by an acute observer

who has had the largest experience, and has embodied in it the results of his observations.

As an educated, scientific physician, it has been the aim of the author, to as great an extent as possible, to raise the practice of medicine from a mere empirical art to a science. Consequently in the department to which he gives attention in his book, he makes special application of physiological chemistry to the diagnosis and treatment of diseases, besides applying scientific principles wherever it is possible. In the preface he very correctly expresses himself as follows: "Although not even the most ardent admirers of medicine can say that it as yet merits the name of an exact science, this ought neither to destroy our hopes nor trammel our labors. With the stethoscope, microscope, test tubes, thermometer and other physical means of diagnosis, a new era dawned upon our art, and now the members of the advanced school of thinkers which is springing up, and carrying chemistry into the domains of medicine, are but the pioneers of the revolution which is soon to follow." It has been the impression that the utmost a physician could do in the practice of his art, was to make use of certain remedies under such circumstances as they had been found useful by experience. But with the increase of instruments of precision, and the advancement of the collateral sciences, an era is beginning in which we can employ medicines in the treatment of disease as the result of *a priori* reasoning without previous experience.

The work of Dr. Harley is the most complete work upon diseases of the liver now before the profession. It embodies not only the results of his own large experience and observations, but also exhibits the researches of others in the same class of diseases. As a scientific treatise of hepatic affections and their treatment it will certainly hold a first position among the standard works.

ANATOMICAL TECHNOLOGY AS APPLIED TO THE DOMESTIC CAT:

An Introduction to Human, Veterinary, and Comparative Anatomy. With Illustrations. By Bert G. Wilder, B. S., M. D., Prof. of Physiology, Comparative Anatomy, etc., in Cornell University, and Medical School of Maine, etc., and Simon H. Gage, B. S., Assistant Prof. of Physiology and Lecturer on Micros-

copical Technology in Cornell University, etc. 8vo. Pp. 600. New York: A. S. Barnes & Co. Cincinnati: R. Clarke & Co. Price, \$4 50.

This is undoubtedly the best work extant for beginners in the study of Comparative Anatomy. There are not a few valuable works upon the subject, but none that we have any knowledge of, that is so full and lucid in all of its descriptions as this. It begins *at the beginning*, and, without premising any previous knowledge on the part of the student, it leads him along from the simple to the complex, exhibiting to him everything worthy of attention. It will be found a most valuable work by those who are desirous of studying Comparative Anatomy at home—its descriptions being so full and complete in recounting the *modus operandi* of dissecting the lower animals. It is very correctly stated that “he who can skillfully dissect a cat will find little difficulty in dissecting a man.”

Prof. L. B. Stowell, of New York, in speaking of the work says: “I know not where to begin or where to end when I review a work representing so much study, careful, painstaking observation, technical scholarship, gigantic indexes, etc. I do not see how it can be improved. The figures far exceed my expectations and must prove to be invaluable.”

Quinine Cophosis, or Deafness from the Use of Quinine.

BY W. R. AMICK, M. D.,

Lecturer on Ophthalmology and Otology in the Cincinnati College of Medicine and Surgery.

THAT quinine has a peculiar effect on the organ of hearing, is manifest to every physician who has prescribed it in large doses, or repeatedly for a given length of time. When given in this manner, in a few hours or days, the system is brought under its influence, and we have certain symptoms produced. The first to be noticed by the patient is a sensation of fullness in the head, and roaring in the ears. When this condition is developed deafness is apt to supervene, especially if the exhibition of the drug is continued, and we have what is called cinchonism, or quininism.

Quinine has a peculiar exhilarating effect upon both

the nervous and venous system. This effect is an individuality, or an inherent property of this drug, which is different in its action from other remedies. When the system is passing from what we may term its natural, or normal condition, to that which is superinduced by quinism, we have a change taking place. The heart acts with more vigor, and the volume of blood that flows through the aorta is increased. With the increase in volume we have an increase in tension, accompanied with a tremor of the vessels. This tremor is produced by a combination of effects derived from the volume, tension and pulse wave.

The vertebral arteries pass into the cranial cavity through the foramen magnum. After they have entered this cavity, they lie on either side of the medulla oblongata. They then converge, and crossing over the anterior inferior portion of this body, they unite and form the basilar artery. The point of union is in the center, and at the posterior border of the pons Varolii.

The auditory nerves are given off from, and pass out at a right angle with, the medulla oblongata. Between them and the vertebral arteries we have located the restiform bodies. As a result of this anatomical condition we have a contiguity of structure between the arteries and the nerves. From the exhilarating effect of the quinia, the nerves are in a very sensitive condition, and are easily influenced. The tremor from the arteries is communicated to them, and they convey these impressions to the brain. Molecular action takes place, the result is referred to the ear, and we have a roaring noise produced. The constant tremor from the arteries produces continued molecular action, and the noise is continuous.

With this increase of arterial tension we have a congestion of the bloodvessels and capillaries of the brain, especially those that are located at the base. As a result of this congested condition of these vessels, we find that those organs that are situated near, and receive their blood supply directly from those vessels, are also congested. However, we do not wish to be understood by this, that no other organ can become congested from the administration of quinia, except those at or near the base of the brain.

We may have as a result of cinchonism, a congestion of

the retina, and an impairment of vision, producing what is known as quinine amaurosis. That the disturbance to vision is caused by a congestion of the retinal bloodvessels has been proven by the fact that the abstraction of blood with the Heurteloup improves sight. If quinine produced an anæmic condition of the capillaries, then the abstraction of blood would simply increase the darkness in the field of vision already shadowy.

From this same cause we may have a congested condition of the labyrinth. We also have a congested condition of the tympanum derived from the same source.

The congested condition of the vessels of the base of the brain produces an irritation of the tri-facial nerve, and as a direct result of this nervous irritation, we have produced a reflex congestion of the tympanum. This interferes with the sound-conducting apparatus of the ear. Whenever we have an obstruction to the free conduction or transmission of sound, then we have a cause that will produce an impairment of hearing. But this is not all. We have a congested condition of the labyrinthine capillaries. This not only irritates the terminal filaments of the auditory nerve, but increases the fluid pressure upon them. The irritation will produce an impairment of hearing by interfering directly with the conductivity of the filaments. The increased fluid pressure also prevents the proper transmission of the waves of sound from the base of the stapes. As a result of this, the impression received by the external wall of the vestibule is changed in the transition from the latter to the terminal filaments.

At first, the exhilarated condition of the nerves has a tendency to increase the intensity of the sound, and in this stage molecular action is rapid.

A sound that was produced by a given number of vibrations persecond may not be recognized as such. The impression received may give it a higher pitch. This is accounted for by the increase of the intra-labyrinthine pressure.

The terminal filaments of the auditory nerve receive the impression of sound from vibrations. Every sound is produced by a certain number of vibrations. The auditory filaments are so arranged, or tuned, so to speak, that they cover the entire register of sound. Then if they are influenced by vibrations, you would naturally suppose that a sound wave passing from the vestibule to the helico-

trema of the cochlea, would agitate or vibrate every fibril that was in this organ. But we have a vibration in unison, and only the fibril that requires this number of vibrations per second, will be agitated by its influence. This agitation is simply a tremor of the fibril, which, when transmitted to the brain, produces molecular action, and the reflex of this in the ear is what we call sound. As we have already stated, a tremor may be communicated from the vertebral artery to the nerve.

More than one fibril can be acted upon at once. Hence we are enabled to distinguish various sounds at the same time. This is the condition when the organ is in a normal state. But when we have the capillaries congested, the intra-labyrinthine pressure is increased, and with this a change in the vibrations after they have been received by the perilymph. An increased perilymphatic pressure means an increased endolymphatic tension. Hence all sounds may be changed. At first magnified, but as the congestion and pressure increase, then we have a decrease from an increase of the resistance through which the vibrations must be transmitted. With a continuation, or even a still greater amount of congestion and tension, we have a corresponding increase of resistance, and hearing is impaired accordingly. A continuation of this state of affairs may lead to profound deafness.

The great danger in cinchonism, especially when vision or hearing is impaired, is that structural or organic changes may supervene, and the injury be permanent.

When we find that vision or hearing is suffering from the use of quinine, then we should either lessen the quantity exhibited, or cease giving it entirely, until the congestion of the retina or labyrinth has disappeared. I am satisfied that quinine produces a congestion of the retina and membranous labyrinth when given to the extent of cinchonism.

That it is occasionally productive of structural changes both in the eye and the ear, I think has already been demonstrated. Quite a large number of physicians, who are in the habit of prescribing quinine liberally, say that the impairment of hearing is only functional, and disappears in a very short time after the drug is withheld. This may be true with the majority of cases, yet we must remember that all diseases are simply functional at first,

and by a continuation of the functional disturbance, an organic lesion or structural change is produced.

We have seen a number of deaf persons who stated that the impairment of hearing followed immediately after they had taken quinine in large doses. There is an idea in some sections of the country, which might be called a "common opinion," that the use of quinine affects not only the ears, but other portions of the body. There is at least one symptom recognized by every one that has used the drug, and that is, that it will produce a roaring noise in the ears. As this is the pathognomonic symptom of cinchonism, we expect to find it in all such cases. That it is produced by a functional disturbance we all admit. That a functional disturbance from the use of a drug, if sufficiently continued, will produce a structural or an organic change, is a question that will admit of argument. Individually, we believe it will.

I might further state that there is another condition that is sometimes developed from the use of quinine, viz., a tendency to hemorrhage. A tendency or disposition to epistaxis and hemorrhages from other portions of the body, I think is superinduced by large and repeated doses of this drug.

We might have a rupture of a capillary bloodvessel in the retina, producing an apoplectic condition of that organ, followed by a reduction of vision. In a similar manner we might have a rupture of a small bloodvessel in the membranous labyrinth, producing an apoplectic condition of this portion of the ear, resulting in an impairment of hearing. In either case there would be a great reduction in the function of the organ. If the effused blood is absorbed in a short time, we may have the normal condition restored. If the irritation (effusion) remains any length of time, then we are liable to have a permanent organic change produced, as the result of the otherwise temporary one. This is simply another link in the chain of evidence to prove that a functional derangement is the forerunner of an organic change.

The deduction is easily made. Do not continue the administration of a drug after it has occasioned a functional disturbance, especially of some of the organs of special sense.

That quinine, when given to the extent of cinchonism, in certain cases, does cause a functional disturbance of

hearing, and even of vision, will be admitted by almost every physician, especially those who practice in malarial sections of the country, and use this remedy for controlling fevers of an intermittent or remittent type. In such cases we must not expect to continue its use without producing a change in some important organ. We say, important organ, from the simple fact, that cinchonism affects the special senses, especially those of hearing, seeing and smelling.

The higher the organ is placed in the scale of special sense, the more delicate its structure, the more acute its perceptive qualities, and the easier it is influenced by quinine and its compounds.

The ear is endowed with the finest and most delicate organism of any of the structures of the body. It stands at the head of the class of special senses, and, as a result of what we have just stated, it is placed foremost in the rank of those that are affected by this agent. As a natural result we have the roaring or buzzing noise, not only as a constant, but pathognomonic symptom of quinism. The patient is aware of this, and speaks of the roaring noise in his head. The physician knows it, and recognizes that the system has been brought under the influence of the drug. All of these conditions are recognized by the influence that the quinine has over one organ, and that organ is the ear. Then we need not be surprised when we see, as a result of heroic and continued doses of this drug, quinine cophosis.

These statements are simply our views upon this subject. They probably differ in some respects from what has generally been accepted as to the influence of quinine upon the organ of hearing. We would be pleased to hear the views of others, whether they be corroborative or otherwise.

EDITORIAL.

COMPOSITION OF QUININE PILLS.—Our namesake of Philadelphia, the *Medical News*, has been doing the profession a very important service, for which physicians should feel very grateful. Having doubts whether the ready made pharmaceutical preparations of manufacturing

pharmaceutists were in all cases what they are represented to be, the conductors of that journal concluded to have some of them analyzed. As quinine is probably one of the most largely used and expensive drugs of the pharmacopœia, they concluded to make the ready-made pills of it, of the manufacturing houses, the subject of investigation as regards the actual quantity of quinine in each pill of a represented quantity. We quote from the *Medical News* in regard to its manner of conducting the investigation. "Every precaution has been observed to preserve the strictest impartiality and to obtain the most perfect accuracy as to results. The analyst is one of our most distinguished experts, and the arrangements such that he could have no knowledge of the source from which the several specimens were obtained. We believe therefore that the results which we publish to-day (Dec. 16) may be implicitly relied upon."

As the *News* states, the results were by no means pleasant to contemplate. There were examined samples of the "two grain" quinine pills of seven of the leading pharmaceutists of the United States, and all but two were found to be sensibly deficient in quantity of quinine, the deficiency ranging from about five to twenty per cent. "If this deficiency is constant, as the examination would seem to render probable, we have here a wrong committed upon the public, against which it is the duty of the profession, as the guardians of the public health, to record its emphatic protest." We are glad to be able to state that all the several samples of quinine in pills were free from adulteration. In no case was there present any of the associate alkaloids of quinidine, cinchonine, and cinchoninidine. This was not the case with the preparation of an Eastern manufacturing pharmaceutist several years ago, which was proved to be composed of a mixture of sulphate of cinchona and sulphate of quinine, instead of the latter alone, as was represented.

As a matter of collateral interest the *Philadelphia Medical News* states, it is worth while to consider the varying price at which the two grain pills are furnished, and the relation of the price to the amount of quinine they contain. While the two grain pills of two of the manufacturers vary but the slightest from what they are represented to be, (that is, to contain two grains of sulphate of quinine in each pill) and sell at \$2 50 a hundred, the

"two grain" pills of Wm. R. Warner & Co. contain but 1.61 of a grain in each pill, and sell for \$2 75 a hundred. The "two grain" sugar coated pills of W. H. Schieffelin & Co., of New York, contain 1.91 of a grain in each pill and sell for \$2 75 a hundred. The "two grain" pills of a Western house contain 1.78 of a grain, and sell for \$1 70 a hundred. If a full weight pill is worth \$2 50, the price asked, by the two manufacturing houses whose pills may be regarded as standard—the houses of John Wyeth & Bro. and Bullock & Crenshaw—this Western house does not swindle its patrons in the amount charged. In fact, its price is rather low. Compare with its price that of Wm. R. Warner & Co. who charge \$2 75 per hundred, while their "two grain" pills contain but 1.61 grains of quinine.

Under the head of "The General Results of this Investigation" the *Philadelphia Medical News* says: "From the foregoing facts we learn:

"1. That the quinine pills of five out of seven of our leading manufacturers have not in them the amount of sulphate of quinine they are represented to contain.

"2. That there is a great variation in the price at which the pills can be purchased.

"3. That the price bears no relation to the amount of quinine really contained in the pills."

GUITEAU'S BRAIN.—Dr E. C. Spitzka, at a late meeting of the New York Neurological Society, of which he is president, stated that the specimens of Guiteau's brain which he had examined showed all the signs of disease described in the official report published in the *Philadelphia Medical News*. "He intimated that Dr. Dana's report in the *Medical Record* was 'fixed' to make it correspond with the editorial views expressed in that journal."

The medical profession seem to be becoming pretty generally agreed that Guiteau was of unsound mind. Autopsy has shown a morbid condition of his brain, incompatible with soundness of mind during life. Besides, a calm, unprejudiced study of his life history proves him to have been insane.

Dr. C. H. Hughes, of St. Louis, editor of the *Alienist and Neurologist*, one of the most distinguished specialists in mental diseases of this country, sums up the conditions existing during the trial of Guiteau, and then asks whether any reasonable chance existed for the life

of the maddest man in bedlam under such circumstances.

"The 'stalwart' press, representing a wing of the Republican party, at once suspected of collusion with the crime, wishing to show to the country their innocence and execration of the murder, with united voice and intense vehemence, demanded the criminal's blood. The 'half-breeds,' chagrined, mortified, thwarted, and stricken with grief and horror at the tragic and sudden death of their lamented leader, most righteously demanded vengeance, and the lately estranged South, wishing to demonstrate the sincerity of its professions of renewed fealty to the Government, and wipe out the stain of the martyred Lincoln's death, vociferously joined in the general cry for Guiteau's execution. Added to this, the frenzied mob seeking and almost accomplishing the prisoner's assassination, and threatening death to counsel, judge and jury, if by any chance any other verdict than death might be reached, and to this add still the rulings of the court, at variance with many phases of morbid mental function, 'that knowledge of right and wrong is always evidence of responsible sanity,' and the yet stronger influence than all others, existing in the overwhelming demand of public polity, that where a criminal is arraigned for a capital crime, having in it the essence of treason, and the guilt of the deed is proven, it is extremely doubtful if any consideration ought to acquit."

In the same editorial Dr. Hughes states that few of the Government experts dared to say, what is most clearly apparent, that though we should concede his insanity not proven, many of Guiteau's acts and words before, at the time of, and since the tragedy, were strangely inconsistent with normal mental balance, uncomplicated by immediate or remote disease.

It is a melancholy fact that it sometimes occurs that a nation of people under certain circumstances, becomes blindly maddened, and, in their blind rage, will wreak vengeance with but little regard for justice. A whole people sometimes seems to be impelled onward by a thirst for blood the same as an individual who has become enraged. All will remember that when President Lincoln had been vilely assassinated by the wretch Booth, what a demand for vengeance was aroused throughout the whole land. That great indignation should have been excited, and prompt and summary punishment of the villains, who

had perpetrated the terrible murder, been urged, would have been no more than natural, but the excitement extended far beyond all reasonable bounds. For one to be suspected of being in any way implicated in the atrocious deed was almost tantamount to being adjudged guilty, and the whole nation seemed to fret at the delay of giving the accused a trial. Poor Dr. Mudd, who dressed Booth's fractured leg when he was escaping from Washington, and had not the slightest idea, at the time, of the crime he had committed, and was perfectly innocent of having taken part in it, barely escaped with his life in those fearful times. The frenzied condition of the times compelled his judges to send him to the Tortugas, where he had to remain as a criminal until the public frenzy abated, when he was released broken down in health. While the public under ordinary circumstances seem too ready to listen to extenuating circumstances, and to give heed to pleas of insanity when the grounds for it are slight, in the justification of crime, yet the contrary prevails during the excitement of a general indignation. In the latter case, not only the ordinary feelings of compassion find no place, but the teachings of science are trampled under foot. Even the votaries of science decline to follow its directions, but employ their learning and wit to make it teach false doctrines.

DEATH OF DR. WATSON.—We notice among the cablegrams from England that the well known physician and author of a Practice of Medicine, Dr. Thos. Watson, is dead. His Practice, twelve or fifteen years ago, was probably the most popular in the profession of any other medical work in the English language. Of late years it has begun to be considered rather behind the times, and is not so much in demand as formerly.

His learning and high professional standing, which he won by hard labor, caused him to be raised to the peerage by the Queen, and appointed physician in ordinary to her Majesty. Such testimonials to medical men in England show that great merit in physicians is far more highly esteemed in England than in this country. We fear, however, that if our President had power to convey titles upon such medical men as *he* deemed worthy of them, in nine cases out of ten, miserable quacks, sycophants of him, would be the recipients, while the really learned,

dignified physicians would continue, as now, rewarded in their own consciousness of possessing worth.

THE UNITED STATES DISPENSATORY.—The fifteenth edition of the United States Dispensatory will be ready in January, 1883. The editors are Dr. H. C. Wood, Professor of Materia Medica and Therapeutics in the University of Pennsylvania, Joseph P. Remington, Professor of Pharmacy, and Samuel P. Sattler, Professor of Chemistry, in the College of Pharmacy, Philadelphia. The revision has occupied about three years, and has been in all respects most thorough and complete—embracing the most recent discoveries in Materia Medica, Pharmacy, Chemistry and Therapeutics.

The relation of the work to the United States Pharmacopœia will be fully maintained, whilst the encyclopædic character of the Dispensatory will be developed to the fullest extent. The new Pharmacopœia will be in all its parts fully expounded and discussed, and the most recent non-official medicines, as well as those long out of date, will be carefully considered in the second part of the work.

THE QUESTION OF Mrs. Frances Scoville's insanity—sister of the assassin Guiteau—was adjudicated at Chicago, October 29th, the jury declaring her to be insane. Her husband alleged that:

In 1770 when the lady's ancestors settled at Utica, N. Y., the family consisted of ten children. Five of them became insane or were afflicted with diseases akin to insanity. This lady's grandmother, he said, the wife of Dr. Guiteau of Utica, was a strong-tempered, peculiar woman, possibly not insane, but probably so. One of this lady's uncles died in an insane asylum in New York. Another died at a moderate age, weak-minded and unfitted for business by erysipelas. The evidence would show that the lady's father died a lunatic after having been insane on the subject of religion for twenty years. Two of her sisters were insane. A niece was a lunatic, and a nephew had died in the asylum at Elgin. Whether the man who was executed at Washington was insane or not, the jury would not be called upon to decide. If he was, that made another insane member of the family. The mother of the defendant suffered from a blood disease, salt rheum, which had been transmitted to her children, and which had severely afflicted the defendant and her two brothers.

It would be shown that she was married thirty years ago at the age of sixteen. During most of her married life she had suffered from epileptic fits.

Dr. McFarland testified to her insanity and to the insanity of her father and sister.

EFFECTS OF QUINIA UPON THE HEARING.—Our readers will find an able article in this issue of the MEDICAL NEWS upon this subject. The article having been handed us too late to properly arrange it in inserting it, we have been compelled to find room for it where we could.

The subject of quininism is highly interesting, and Dr. A. has advanced some theories in regard to it that are his own. He will be glad if some, who have had experience, will publish it. We hope all will attentively read the article.

New Microscopical Works.

WE have received a couple of very valuable microscopical works which should be in the hands of every one engaged in the study of Microscopy. One of them is entitled "The Student's Manual of Histology, for the use of Students, Practitioners, and Microscopists. By Charles Stowell, M. D., Prof. of Histology and Microscopy, etc., in the University of Michigan." The title of the other is, "Microscopical Diagnosis. By Charles Stowell, M. D., and Louisa Reed Stowell, M. S."

The first of these works has now reached its second edition. It is illustrated by 192 engravings, which, although not of the most artistic character, are to the point, and are really plainer for study than many that are more finely executed. With such a work as this constantly before him, the student of histology, who wishes to see everything for himself, and is not satisfied with the descriptions of others, will have his labors greatly lightened, for in all his various researches he will be taught just how to proceed—the directions being very plain.

The first chapter is devoted to a description of the microscope, and instruction in manipulating it. With the second chapter the study of histology begins, commencing with the study of amœba, and then proceeding to the study of cells. The third chapter is devoted to the study of the blood.

In regard to differentiating between the blood corpuscles of man and other animals, Dr. Stowell says: "Although the corpuscles of the blood of the dog and of man are so nearly identical that even in freshly prepared specimens they cannot be distinguished positively from each

other, yet the corpuscles of the blood of the cat, hog, horse, sheep, and ox are so much smaller than human blood corpuscles that a positive distinction is possible, not only in freshly prepared specimens, but also when they are found in stains, clots, etc." But Dr. Woodward and others, when a human life is at stake, state that they would not wish to testify that an alleged stain was not produced by the blood of an ox or pig, if the question should arise whether it was made by human blood, or by the blood of one of these animals. A few years ago we were exhibited a slide of vegetable spores, which, we were assured, had been pronounced human blood corpuscles by a number of gentlemen who regarded themselves competent microscopists. We must say that these spores so resembled blood corpuscles, that we are confident only an expert could have detected that they were not. It is highly essential that one who has indulged in microscopy to some extent should be exceedingly careful in announcing himself an expert, or he may make himself exceedingly ridiculous. We have even heard of a microscopist declaring a stain made by red paint to be a blood stain, which he believed had been made by human blood, but was not willing, he said, to swear to the latter fact.

The second work is devoted to microscopic manipulation, and will be found a very valuable aid to all beginning the study of microscopy. It contains about a dozen well executed plates, among which is a page of double stained blood corpuscles. The chapter on urinary deposits is worth the price of the book.

The two works make an excellent outfit for those engaged in the study of the revelations of the microscope, and they should endeavor to possess them. If a student should consult us, who had but a few dollars to expend for microscopic books, we would advise him to purchase these two in preference to other works, although there are others, like Carpenter's, of great value. But Carpenter is more useful to those who have some knowledge of microscopy. The two works, although sold separately, naturally go together.



